

PART XXXIV.

SELECTIONS

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CONTENTS.

IT.	Page.
I.—REPORT AND OBSERVATIONS AS TO THE GENERAL CONDITION AND PROSPECTS OF AJMERE AND MHAIRWARA.	
No. I.—From MAJOR W. F. EDEN, Officiating Commissioner of Ajmere, to the SECRETARY TO GOVERNMENT North Western Provinces. Dated Aboo, the 12th June 1860.—No. 77. ...	53
No. II.—From MAJOR B. P. LLOYD, Deputy Commissioner, Ajmere and Mhairwara, to MAJOR W. F. EDEN, Officiating Commissioner, Ajmere and Mhairwara. Dated Ajmere, the 28th May 1860.—No 147. ...	54
No. III.—From G. COUPER, Esq., Secretary to Government, North Western Provinces, to the OFFICIATING COMMISSIONER of Ajmere. Dated Nynce Tal, the 16th July 1860.—No. 815 A. ...	77
VII.—REPORT ON A SPECIES OF PALSY, PREVALENT IN PERGUNNAH KHYRAGURH, IN ZILLAH ALLAHABAD, FROM THE USE OF KESSAREE DAL, AS AN ARTICLE OF FOOD.	
No. I.—From J. D. SANDFORD, Esq., Officiating Under-Secretary to Government, North Western Provinces, to OFFICIATING COMMISSIONER of Allahabad Division. Dated Nynce Tal, the 3rd August 1860.—No. 871 A. ...	88
VIII.—REPORT ON A SPECIES OF PALSY OF THE LOWER LIMBS, PREVALENT IN PERGUNNAH BARRAH, ZILLAH ALLAHABAD.	90

ART. VI.

REPORT AND OBSERVATIONS AS TO THE GENERAL CONDITION AND PROSPECTS OF AJMERE AND MHAIRWARA.

*-From MAJOR W. F. EDEN, Officiating Commissioner of Ajmere, to the
SECRETARY to GOVERNMENT, North Western Provinces. Dated Aboo, the
12th June 1860.—No. 77.*

I have the honor to forward, for the perusal of His Honor the Lieutenant Governor, the accompanying Report from Major Lloyd, Deputy Commissioner, Ajmere, stating the result of his enquiries and observations as to the general condition and prospects of the districts of Ajmere and Mhairwara, during his late tour of inspection.

2.—The nature of this Report, exhibiting as it does in itself the facts ascertained by a personal visit, requires but little from me in the way of comment.

3.—After giving some curious and interesting information on the subject of the peculiarities of the late monsoon and falls of rain in former years in the districts, and noting their effect on the crops, Major Lloyd proceeds to detail the measures he has adopted with the view of improving the present very defective state of the Putwaree's hufthanah papers, attention to which was directed in your letter No. 1437 of 30th July last.

Should these measures, as Major Lloyd fully anticipates, prove successful, a fairer re-distribution of the jumma will be made where necessary, and at any rate the experiment is one involving no expense.

4.—The total amount of remissions solicited by the Deputy Commissioner amounts to Rs. 3,634-6-1, a statement of which, with reasons, is appended to his Report. Among villages therein named is Necarun; to the special notice of which Major Lloyd devotes paragraphs 18 and 19, which fully explain his reasons for advocating so large a remission for this one village as Rs. 1,000. I beg to recommend the proposed reductions for consideration and sanction.

5.—In paragraph 27, Major Lloyd submits for consideration, that a person be appointed for the supervision of the execution of works, repairs to bunds, tanks, &c., under the designation of an Extra Assistant to the Deputy Commissioner. The

perusal of paragraphs 20 to 28, cannot fail to impress the reader with a thankful feeling of the immense benefit which has resulted from a careful system of collection and re-distribution of the rain which falls in the monsoon; and as the very existence of the present agricultural prosperity, so happily compared with former times by the Deputy Commissioner, is dependant for the most part on the efficient supervision of the bunds and embankments, I would recommend Major Lloyd's proposal for His Honor's consideration. The designation of the office is immaterial, but I am fully of opinion, that the employment of a respectable and qualified person under the Deputy Commissioner as an Overseer, cannot fail to be attended with good results.

6.—It appears (paragraph 35) that, at the settlement, a small grant of rent-free land was continued from former times for life to the then Putails of villages; some of these have now lapsed, and the Deputy Commissioner desires to restore the grants to the successors of former holders for the period of the present settlement; as this is the only remuneration they enjoy, and, adding to their dignity, naturally gives them more authority, I request His Honor's sanction.

7.—The Mapa Tax, yielding an average revenue for the past five years of Rs. 1,100 per annum, Major Lloyd is anxious to discontinue, as he considers its remission both wise and politic. The orders of Government on this point are solicited.

8.—In conclusion, I am sure His Honor will peruse with satisfaction this report, depicting as it does, from personal investigation, the flourishing state of the agriculture of the district, and the happiness and industry of its population. I have so often expressed my deep sense of the valuable services of Major Lloyd, that it would be mere repetition here again to dilate on them. I therefore simply commend him to His Honor's notice.

W. F. EDEN,

Officiating Commissioner.



II.—From MAJOR B. P. LLOYD, *Deputy Commissioner, Ajmere and Mhairwara*, to MAJOR W. F. EDEN, *Officiating Commissioner, Ajmere and Mhairwara*. Dated *Ajmere, the 28th May 1860*.—No. 147.

Having recently completed a lengthened tour of inspection through all parts of the districts of Ajmere and Mhairwara, I have the honor to submit a Report upon their general condition and agricultural prospects, for the current year.

2.—It has been frequently recorded in regard to these districts, that while their prosperity depends almost entirely upon the seasons, the uncertainty of the supply of rain is proverbial. Hence this is an all-important subject; and, following established usage, I proceed in the first place to notice the peculiarities of the past monsoon.

3.—No rain fell in any portion of the country until the end of July 1859.

On the 29th of that month the monsoon burst furiously upon us, with a very heavy and prolonged fall, amounting, at Ajmere, to 10·8 inches in 24 hours. The tanks were every

where filled to overflowing, and some damage was sustained. The Anna Saugor Lake at Ajmere rose to a height only attained during the unprecedented flood of the previous year, and had it not been for the new escape, then constructed, the Bund might have been overtopped. Happily this was not the case, and on the whole the irrigation works stood the storm well. The damages sustained will be noticed further on. A brief interval of fine weather, sufficient for the sowing of the Khureef, was followed by a succession of heavy floods, which caused much havoc in all low lands, the ground was saturated with wet, and the crops rotted from excess of moisture. On high lands, where the surplus wet could run off, they were generally however above the average, and in some places most luxuriant.

4.—The following table shewing the average fall of rain for the past ten years

Average fall of Rain.

is interesting, as demonstrating the uncertainty which attends the supply in this part of India, as well as the greatly

increased average fall of the last few seasons. It affords too, an ample proof of the great utility of the reservoirs which have been constructed by Government, in retaining in the districts a large portion of the annual fall, which would otherwise escape to the ocean. And indeed it may be possible, that from the moisture they have preserved in the soil, and the great increase of vegetation they have thus helped to create, these reservoirs have been to some extent instrumental in causing the increased supply of rain indicated in the table below. Certain it is, that water is now to be found in Mhairwara within a few feet of the surface in high ground, where formerly it was wholly unattainable; and wells are now sunk with ease and success in places where, but a few years ago, all efforts to attain a supply of water would have proved vain.

Table showing the average fall of Rain in Ajmere and Mhairwara, from 1850 to 1859.

YEARS.	AJMERE.			MHAIRWARA.		
	Ajmere Tehseel.	Ramsur Tehseel.	Rajgurh Tehseel.	Nyanugger Tehseel.	Saroth Tehseel.	Todgurh Tehseel.
1850, ...	11·2	10·6	12·1	7·1	1·0	1·5
1851, ...	20·9	15·7	25·2	27·8	25·3	19·3
1852, ...	23·5	17·4	20·8	22·3	25·0	4·1
1853, ...	17·1	10·1	13·5	11·0	10·6	10·7
1854, ...	31·2	15·2	26·6	22·1	21·6	1·8
1855, ...	3·7	18·1	23·5	15·6	16·0	22·7
1856, ...	25·1	17·2	15·6	19·7	15·4	2·3
1857, ...	34·1	23·2	31·1	25·3	16·8	28·4
1858, ...	33·4	25·2	21·3	20·9	23·5	31·2
1859, ...	35·6	19·9	23·3	21·9	22·0	27·9

h. Although the climate was in general partly suffered from excessive moisture, (as already stated) the Rubber has been generally abundant, as might be anticipated from the favorable nature of the season. In the middle of February last, some parts of pergunnah Rajamah, and also a portion of pergunnah Barath, suffered from severe hail-storms; but happily the effects of this visitation were confined to a small space, and the aggregate loss is inconsiderable. In five villages in Madrasa too, the wheat crops have suffered from a blight called "Laha;" but, upon the whole, the season may be pronounced to have been a highly favorable one to the agriculturist. It was anticipated in the settlement made by the late Colonel Dixon, that partial remissions of revenue would be requisite to meet occasional losses, arising from variations in the seasons, and other accidental causes and there are a few cases which will be noticed in a future paragraph, in which it is my duty to solicit the indulgence of Government.

ii. The submersion of assessed lands, by the over-filling of reservoirs, was brought to notice during my absence, by the Officiating Submersion of assessed lands, Commissioner, Captain Brooke, in his Report No. 158, dated 24th July 1853, and with reference to the Orders of Government contained in Mr. Secretary Muir's letter No. 1535, dated 9th October 1854, an attempt was made, in the early part of last cold season, to ascertain the amount of losses actually sustained by the villages indicated, and the income of these assets, subsequent to the settlement, from the cultivation of new lands, &c. in view to adjusting the losses of individual proprietors from the general profits of the mahal, or to a reduction of jumma, where the profits from the whole estate had become diminished below the jumma fixed at the settlement. The measures adopted for this purpose were detailed in my letter No. 349, dated 7th December last, paragraph 15, and were approved by the Honorable the Lieutenant Governor in the Secretary's letter No. 12 A, dated 3rd February last, paragraphs 12 and 13. The losses of individuals were easily determined by ascertaining, at the latest moment for sowing the Rubber crops, the exact fields, as per village maps, which would not be available for culture, together with the amount assessed upon them, but owing to the very imperfect state of the Patwarry's registers, the discovery of the measure and density of assets on the whole mahal, with any degree of accuracy, was found to be impracticable. In all but a few villages, however, which will be noticed hereafter, the adjustment of individual claims has been effected without difficulty, either from the "shamilar" or land held in common or by a rateable distribution of the assessed rents upon the other lands of the village. So far as the process went, the difficulty has been overcome and all cases of complaint removed. I may here remark, that in dealing with these cases it should always be borne in mind, that in many villages lands which remain submerged for years, from full crops of water which are raised below the level of the

7.—The very defective, indeed useless, state of the Putwaree's hufthanah papers was noticed by Captain Brooke, in his Report, dated 24th July 1858, and my attention was directed to the subject in paragraph 8 of a letter from Secretary to Government No. 1437, dated 30th July 1859. Although some improvement had been effected, their worthlessness as records became apparent during this enquiry, and from the daily examination of them made by me during my progress through the districts, it is to be regretted, that in the early days of the settlement the importance of securing efficient Putwarees, and the necessity of providing them, with adequate remuneration, appears to have been overlooked. It was the regular practice of the late Colonel Dixon to inspect the papers produced during his annual tour, in the presence of the villagers; but the examination was necessarily a cursory one, and served more as a check upon the village expenses, than as any test of the registers of land: and so long as complaints were not made, the production of the books was usually as much as was accomplished. The late Deputy Collector was entrusted with the duty of seeing to the regular preparation of these records, and with the general superintendence of the Putwarees. Latterly this officer appears to have become quite superannuated and scarcely capable of active duty. He died in the early part of last year. The present hufthanah papers for the most part contain nothing more than a copy of the original khusreh and khewut papers; while of the transfer of property or of the increase and decrease of cultivation since the settlement, no trustworthy account is in existence.

8.—On my first assuming charge of the districts in December 1857, a scheme of grouping the Putwarees of the "Hulkabundee system," was drawn up, and was partially carried out in 1858 (during my absence in England) by Captain Brooke, Officiating Deputy Commissioner, but the formation of a competent staff of Putwarees and the re-casting of the village papers is necessarily a work of time, and beyond instructing the new Putwarees; but little real progress in the formation of correct registers has, I regret to say, been yet effected. Indeed, in the absence of all reliable record of the mutations of property during the ten years which have elapsed since the settlement, to do more was impossible.

9.—All the khalsa villages of Ajmere were visited by me during my tour, and my attention was anxiously directed towards ascertaining the measures that would be requisite to remedy this state of things effectually. To ascertain merely the transfers of lands from one proprietor to another, would have been a simple matter, but it was found that in many villages the lands themselves forming the holdings of individual proprietors and co-partners, had been so completely changed, that the ~~original~~ records were more or less useless in this respect also. The boundaries ~~of the villages~~ had been broken up and new fields formed, common land has been taken ~~in~~ in imperfect putteedaree estates, without the knowledge or consent of the proprietors; and various other mutations of property have occurred.

has been made: again, unirrigated land has been irrigated, and fields once fertile, have become unproductive, and yet the internal village settlement, and distribution of the jumma, has remained unaltered, causing annually numerous complaints, which have been hitherto disposed of as they arose, but without attention being directed to their origin.

10.—Careful enquiry into numerous cases, and daily intercourse with villagers and Putwarees, soon convinced me that, however

Necessity for an emendation of the Register of proprietary rights, and in many instances re-distribution of jumma.

correct the original record formed at the settlement may have been, it is very far from representing the present condition of village property; and that not only is the emendation of the Register of proprietary rights, as a mat-

ter of record, required, but that in many instances an early re-distribution of the jumma, in accordance with the now existing state of things, is urgently called for, in order to apportion the rental of individual proprietors to the altered condition of their holdings.

11.—Entertaining the above views then, it seemed to me that the object

Agency of Putwarees determined upon.

might be attained through the agency of the Putwarees, some of whom I had ascertained, by personal examination, were sufficiently acquainted with the system, to lead to the hope, that with but little further instruction, they would be able to perform the required work with efficiency. The Deputy Collectors and Tehseeldars were sounded upon the subject, and all concurred in the desirability of the measure, and in the practicability of carrying it out by the agency suggested. It was therefore at once determined upon. The object in the view and the nature of the work was fully explained by the Tehseeldars to the Putwarees, as well as to the most intelligent of the heads of villages; and the proposal was every where met with approval. The scheme was briefly this: the Putwaree, provided with a copy of the field register (khusreh) and field map, was to compare them on the ground, field by field, noting any difference between the recorded and actual condition of each particular field, whether in respect to proprietary rights or to the quantity or quality of the land. This work carefully performed would, it was hoped, form the basis of a new and correct record.

12.—At the time of the settlement the people were generally quite unable to

Ignorance of the people at the time of Settlement. The present proceedings understood.

comprehend the object and nature of the proceedings, and ignorant how nearly their interests would be affected by them; but now the experience of ten years has taught them, if not to see the full advantage of the system, at least to be careful of their own rights; and it is confidently believed that the present proceedings being well understood, and their object appreciated, each proprietor will himself be anxious and careful to guard his own interests, and to secure a correct registration of his property. Thus the most efficient check possible on the work will be ensured.

13.—To secure the efficient performance of the work and uniformity in preparing the new record, a set of rules was drawn up, a copy of which is appended. It will be observed, that unless in cases of dispute, or of the formation of entirely new fields, a re-measurement is not to be resorted to, and it is believed that upon the whole the cases where it will be necessary, will not be very numerous. On other points of detail, I would solicit a reference to the rules. It will be seen that provision has been made for testing (purtalling) the work of the Putwarees by the Tehseeldars and Deputy Collectors, and my own attention will be turned to this duty whenever possible.

14.—On the completion of the corrected register of fields, a khuteonee will be prepared, and the re-distribution of the jumma (where this is found necessary) will be undertaken. It is hoped, that the latter will be effected entirely by the people themselves, and no pains will be spared to induce them to do it.

15.—It is my belief that the work now in progress will produce very beneficial results, both in the attainment of a tolerably faithful record of rights, and in the re-adjustment of the burden of the Government revenue. Over-assessed individuals will be relieved, and a corresponding increase will be imposed on others, in just proportion to their means. The “shamilat” or common lands, upon which no assessment was thrown at the time of the settlement, will be defined, and will become a source of profit to the body of the proprietors, instead of (as has hitherto been not unfrequently the case) being scrambled for each season, without any of those who cultivated them paying rent to the common stock. The opportunity will be taken to arrange for the assessment of lands liable to submersion by exchanging them for common lands or otherwise, as may be found desirable. Lastly, should no such good fruit, as I anticipate, be borne, and the experiment prove a failure, no evil can, I believe, result; no expense will be incurred; the original records will remain in *statu quo*; and at all events the Putwarees will have benefitted by the knowledge of their duties, which they will have gained.

16.—In Mhairwara, the Putwarees have been recently appointed on the hulka-bundee system, and are now under instruction. Should the plan above described be found to answer in Ajmere, it is proposed hereafter to adopt it in Mhairwara also.

17.—Until some such enquiry is completed, it will be impossible to ascertain with any degree of certainty the real assets of estates, and with respect to villages suffering from over-assessment, it may be well to postpone permanent measures of relief, pending the result of the enquiries now in progress. I append a list of those in which I would advocate remissions for the present year. They have all been visited personally by me, and I have been guided in my decisions as to the measure

of relief required by enquiries made on the spot, as well as by the previous history of each mahal. The annexed statement will give a concise resumé of each case, and I solicit a reference to it. The amount of relief, which I would earnestly recommend to be sanctioned, is as follows :—

					No. of Villages.	Amount. Rs. A. P.		
Ajmere,	...	...	...	...	6	1,717	0	0
Ajmere Mhairwara,	...	...	...	...	11	1,142	0	0
Meywar Ditto,	...	...	...	...	3	775	0	0
Marwar Ditto,	...	...	...	...	0	0	0	0

Some of the villages are very poor, especially those in pergunnah Beawur, and the above sum is, I am convinced, the least which should be remitted for this season.

18.—The Ajmere village of Neearun in pergunnah Rajgurh, demands especial notice. It was formerly a small hamlet, which, with difficulty, paid Rs. 600 per annum to Government, its lands being altogether dependant on the rains. Colonel Dixon constructed a noble masonry Bund, at an outlay of Rs. 32,000, across the bed of a small river, (the Dhye) forming an extensive lake, by which a wide extent of unproductive land was brought under the plough; and gradually under his fostering care, a flourishing village has sprung up now containing 1,200 inhabitants. This fine reservoir was only completed shortly before the settlement, and it was thought best to retain the village under direct management. The following is a detail of the revenue derived from it under Kham management, prior to and since the completion of the Tulao, by which it will be observed that nearly double the original outlay expended upon the work has already been realized.

Years.	Rs.	A.	P.	Years.	Rs.	A.	P.	Years.	Rs.	A.	P.	Years.	Rs.	A.	P.
1843-44,	643	0	0	1847-48,	1126	0	0	1851-52,	7011	0	0	1855-56,	7000	0	0
1844-45,	898	0	0	1848-49,	1509	0	0	1852-53,	6661	0	0	1856-57,	7230	0	0
1845-46,	949	0	0	1849-50,	1278	0	0	1853-54,	6879	0	0	1857-58,	7000	0	0
1846-47,	985	0	0	1850-51,	5113	0	0	1854-55,	8000	0	0	1858-59,	7000	0	0

In 1854-55 a lease was given by the late Colonel Dixon at Rs. 8,000 per annum; but this being found too high, the demand was reduced the following year to 7,000. In 1856-57, Rs. 7,230 was realized; but in 1857-58 the jumma again fell to Rs. 7,000, at which sum it was fixed by Captain Brooke, pending a regular settlement.

19.—During the first few years after the formation of the lake, the land which was fresh and vigorous, yielded unusually heavy crops, Serious falling off in Crops. which became famous throughout the district. Wheat, barley, and gram grew with a luxuriance unknown elsewhere, and the village throve.

apace. But a constant succession of grain crops must, sooner or later, impoverish any soil, and the great scarcity of manure prevented the Necarun zemindars from employing it. Hence it is not surprising that a serious falling off in the produce of the village has taken place. I recently encamped there, and was greatly struck by the poverty of the crops. Some fields of wheat and barley would evidently yield little more than the seed sown in them, and I regret to say that the great enemy of cultivation in these parts—saline efflorescence—has shewn itself to some extent in lands situated near the lake. Necarun is situated on the high road leading from Marwar into Meywar and Malwa, and with care may probably become a flourishing town. Should this ever be the case, the cultivators will benefit by the supply of manure they will obtain, and which they now sigh for in vain.

The Government will also derive benefit from their prosperity, and I would, under all circumstances, recommend that the demand for the past year be reduced by Rs. 1,000, in consideration of the greatly deteriorated crops of wheat and barley. This will, it is believed, meet the deficiency; but in making future engagements, I am of opinion, that still further reductions will be necessary. The lease granted not having received the sanction of Government, and being only from year to year, I propose as early as practicable to submit a detailed report of settlement, for the remaining period of the general settlement of the district.

20.—The state of the embankments upon which the prosperity of the district so much depends, demanded much of my time and attention. All the large works, both in Ajmere and Mhairwara were visited and carefully examined, and only a few of the smaller and less important ones were omitted.

21.—The damages sustained during the rains of 1858, were reported by Captain Davidson, and the repairs proposed by him to be executed during the last hot weather, were estimated to cost Rs. 13,710. This sum being beyond the means of the local Talno Fund, the Government was pleased to sanction a grant of Rs. 7,000 in aid of the Fund. Much of the work estimated for, however, consisted of the construction of masonry plinths in front of the embankment walls in view to strengthening the foundations. This, however desirable, was not immediately necessary, and as the work was commenced late in the season, it was found only possible to execute the repairs most required. These were as follows:—

Repairs executed during the last Hot Season.

Pergunnah.	No. of Tanks.	Amount from Local Funds.	Amount contributed by Zemindars.	Total.	REMARKS.
Ajmere, ...	17	1,813 3 9	98 5 0	1,911 8 9	
Ransur, ...	32	5,364 0 10	2,147 10 9	7,511 11 7	
Rajgurh, ...	14	949 12 5	885 2 4	1,834 14 9	
Total, ...	63	8,127 1 0	3,131 2 1	11,258 3 1	
Beawar, ...	14	275 10 3	745 13 0	1,021 7 3	
Saroth, ...	2	203 1 8	0 0 0	203 1 8	
Todgurh, ...	7	355 0 0	160 5 5	515 5 5	
Total, ...	23	833 11 11	906 2 5	1,739 14 4	
Grand Total, ...	86	8,960 12 11	4,037 4 6	12,998	

22.—There being a surplus at the credit of the Ajmere Tulao Fund after executing the above repairs, and as the anticipated income of the year would be sufficient with care to meet the damages sustained from the last year's rains, I have not thought it right to avail myself of the grant of Rs. 7,000 sanctioned, and in this, I trust, I may have acted correctly.

23.—The repairs executed during the past year, were carefully examined, and it is satisfactory to be able to state that the work seemed generally well done.

24.—In the present season the repairs required, and the work undertaken, of strengthening the embankments by additional earth-work, and by rear retaining walls, are estimated as follows:—

DISTRICT.	Pergunnah.	No. of Tanks.	Total Amount to be expended.	From Tulao Fund.	From Villagers.	REMARKS.
Ajmere, {	Ajmeer and Rajgurh,...	10	941 0 0	587 8 0	353 8 0	
	Ramsur, ...	27	7,101 9 6	4,618 7 3	2,483 2 3	
	Total, ...	37	8,042 9 6	5,205 15 3	2,836 10 3	
Mhairwara, {	Beawur, ...	19	3,890 8 0	3,079 8 0	811 0 0	
	Saroth, ...	10	1,605 0 0	1,605 0 0	0 0 0	
	Todgurh, ...	15	1,024 0 0	994 0 0	30 0 0	
	Total, ...	44	6,519 8 0	5,678 8 0	841 0 0	
Grand Total for both Districts,		81	14,562 1 6	10,884 7 3	3,677 10 3	

This expense will be entirely covered by the Tulao Funds and local Contributions without taxing the liberality of Government. In all the larger villages the people willingly come forward to assist in making these repairs, in many cases undertaking half the estimated cost of them. It is usual to entrust all earth-work repairs to them, and it is found that they do them better than hired labourers, and of course far more cheaply. All are fully alive to the benefits they derive from the Irrigation works, and their aid is freely given in preserving them.

25.—In the 6th paragraph of letter No. 1535, dated 9th October 1858, from the Secretary to Government, a report is called for upon a New Cut at Ramsur proposed by Captain Brooke. A new Cut which had been proposed by the Officiating Deputy Commissioner Captain Brooke, in his Report No. 158, dated 24th July 1858; but as it was desirable to examine the spot thoroughly, previous to giving my opinion upon the project, I postponed doing so, especially as, from previous knowledge of the locality, I was very dubious of the necessity for the outlay. This view was

confirmed by a careful examination during my tour. The proposed feeder would be useful to Ramsur in years of draught, but the tank is well supplied without it, and there is some reason to suppose that it might interfere with the supply of a large reservoir in the vicinity of Loherwara, if carried to the extent proposed. At all events the zemindars of Ramsur informed me they did not require it, and would not contribute to the cost of its construction, which is a sure test that they do not anticipate much advantage from it; I therefore do not recommend its construction.

26.—The Ajmere and Mhairwara embankments have been so fully described in Colonel Dixon's "Sketch of Mhairwara," and in his copious

Means of keeping the Irrigation works in repair, and the appointment of an European Extra-Assistant in room of Mr. McCulloch, recommended.

Reports, that any further general notice of them here seems superfluous; but as on them depends, under Providence, the prosperity of the District, the means of maintaining them in a state of efficiency becomes a matter for most

serious deliberation. The works were constructed by the late Colonel Dixon, entirely through the agency of natives. The Tehseeldars superintended all the works in progress in their respective jurisdictions, and similarly attended to all current repairs. In 1853, the appointment of an Uncovenanted European Assistant to the Superintendent of Ajmere and Mhairwara, was sanctioned under a Resolution of the Most Noble the Governor General in Council, No. 857, dated 1st April 1853, "on a salary of 150 per mensem, with the prospect of promotion to the post of Deputy Magistrate and Deputy Collector, on a salary of Rs. 250 per mensem." Mr. McCulloch was appointed as a Sub-Assistant Engineer to the situation, for the purpose of aiding in the Superintendence of the Irrigation Works, and of being initiated into Colonel Dixon's system. From a variety of causes however, he seems to have been entrusted with very little duty in connection with Public Works, but to have been chiefly employed as a Teacher of Surveying and Mathematics in the Ajmere School. The selection was not a fortunate one, and after some correspondence, which need not be here further adverted to, Mr. McCulloch was transferred to Roorkee as an Assistant Supervisor, by Government Order No. 145, dated 27th May 1859.

27.—In connection with his removal, the Government of India was pleased to sanction the employment of two European Sergeants from the Royal Engineer Company at Nusseerabad at the rate of Rs. 100 per mensem each, to be employed in the office of the Assistant Engineer, to be appointed in the room of Mr. McCulloch. With reference to the suggestion of the Local Officers at Ajmere for employment of one or two hard-working Sergeants in the room of Mr. McCulloch, to be obtained from the Royal Engineer Company, I am to state that there is no objection to application being made to the Local Military Authorities.

tained under the late Colonel Dixon. The same system of adequate supervision, the appointment of an Assistant Engineer to draw plans and sections of the works, and the appointment of a

as to check the Accounts, is very desirable; and I would respectfully submit for consideration, that were such a person appointed under the designation of an "Extra Assistant to the Deputy Commissioner," he would be available for such occasional other duties as might be found convenient. Mr. McCulloch's salary was Rs. 150 per mensem, and since his removal this sum has been a saving to Government. In addition to the Irrigation works, the construction and repair of roads and bridges would generally afford employment to such an Officer, and I trust that my proposal may receive your support.

28.—Satisfactory progress was made during the past season in minor works of Irrigation, such as the digging of wells, and throwing up small embankments called "Narees." In almost every village I was shown something of this nature, either in progress, or in contemplation. It is my practice to give Tuccavee advances by small instalments at a time, a second advance not being sanctioned until the Tehseeldar has reported the work as actually in progress, and that the former advance has been expended upon it. The due appropriation of the money is thus ensured, and its ultimate recovery provided for.

29.—The villages under direct management have received much attention from the Tehseeldars, and it was gratifying to find signs of returning prosperity apparent on my visiting them, in the return of absconded cultivators, and location of new ones. The arrangements in regard to these for the future will be entered upon shortly, and will receive detailed notice in a separate Report.

30.—Having served in these Districts as an Assistant under the late Colonel Dixon, from 1849 to 1853, previous to my being appointed to the Superintendency of Neemuch, a few observations on their present general condition, as compared with my former recollections, may possibly be acceptable. It may be satisfactory to you to know, that in those parts of the country with which I was formerly most familiar, I was much pleased and struck with the signs of increasing prosperity which are discernible. A very marked increase in the land under cultivation is apparent in the pergunnahs of Ajmere and Rajgurh in Ajmere, and generally throughout Mhairwara. With some few exceptions the villages exhibited symptoms of increasing population, in the appearance of new houses, and it was rare to hear of recent desertions. This improved state of affairs is generally attributed to the construction of reservoirs, and indeed it may be said that a village provided with a good tank will certainly thrive under ordinary circumstances. This is strongly exemplified in villages inhabited by Goojurs, who formerly picked up a precarious subsistence, by grazing cattle, depending upon the seasons for forage, and for the supply of pulse grown in the rains, for themselves and families. Speaking of one of these villages in pergunnah Rajgurh, a Putail one day observed to me, that the men of Brigcheewas, who in old days had not a kummul (coarse blanket) to cover them, could now afford to dress in broad cloth.

31.—In Mhairwara, in the pergunnah of Beawur, the great increase of cultivation within the last ten years is very striking. Lands, which I can well remember covered with briars and low jungle, presented this year sheets of luxuriant cultivation. Indeed, the whole valley of Beawur, which forty years ago is well known to have been a wild and almost uninhabited jungle, was last September covered with magnificent crops up to the very basis of the adjacent hills.

32.—Nothing can more plainly bespeak the great social change which has been wrought in the inhabitants of Mhairwara than the deserted and ruined state of their *old* villages. These were formerly invariably perched upon the hills, in almost inaccessible places, for the sake of safety from the attacks both of their fellow-men and of wild beasts, and most of them were protected by some sort of rude fortifications. The adoption, however, of habits of industry and agriculture has made the retention of such dwellings alike unnecessary and inconvenient, and hence new hamlets are every where springing up in the valleys, while the old habitations on the heights are fast falling to decay. A stranger indeed can with difficulty comprehend the change which has taken place, but to hear an old Putail in Todgurh describe his recollections of the state of that pergunnah in his youth time, and, at the same time, to look upon the rich valleys and abundant crops which now every where meet the eye, could not fail to excite the admiration and wonder of any man. Industry and peace have taken the place of rapine and plunder; rising villages and rich cultivation have sprung up in room of dense jungles; and this within the space of forty years, and chiefly through the instrumentality of one man! Truly it is a triumph of which the Government may well be proud, and which will preserve Colonel Dixon's memory for centuries to come among the Mhairs.

33.—The industry with which agriculture is pursued by these once wild people is very remarkable. In Todgurh and the Southern parts of Mhairwara, great attention is paid to weeding, and the cleanliness of the crops and general neatness of the farming would excite admiration even in Norfolk. The great want all over the district is cattle and manure.

34.—The poppy is now extensively cultivated in the South, and for the last few years the price of the opium alone, produced in the Todgurh pergunnah, has more than covered the total amount of the Government demand. The opium bears a high character as to quality, and is sold at Palee or Nyanuggur for the Bombay market. The cultivation of the poppy is extending rapidly, and this year it has been grown to some small extent in pergunnah Beawur; but in the Ajmere district, I am not aware that it has been yet produced.

35.—In the early days of our management of the Mhairwara tracts, small grants of rent-free land were made by Colonel Hall, the first Superintendent, and by the late Colonel Dixon, to the Putails, or heads of villages, as an inducement to them to bring lands into cultivation. These

Increase of land under cultivation in Mhairwara.

Social changes in Mhairwara.

Cultivation of Opium.

Rent-free lands enjoyed by Putails for life, recommended to be continued for the period of present settlement.

sisted of less than four beegahs (nearly two acres) each, and at the settlement they were confirmed to the respective holders for life. Within the last two or three years a few of these grants have lapsed, and the lands have been resumed. I received several petitions from the Elders and others, praying for their restoration, *not* on account of the assessment levied upon them, but that the possession of a bit of rent-free land confers dignity and status upon the Putail. The appeals made to me on the subject were so earnest, that I venture to solicit the favorable consideration of Government to the continuation of these lands, rent-free, to the Putails who enjoy them, for the period of the present settlement, irrespective of the holders' lives. The Putails enjoy no remuneration for their office of "Lumberdar," and the concession of these lands would be hailed with the greatest satisfaction, while the loss to Government in revenue would be most trifling. In a future settlement it may perhaps be well to arrange for a money payment, as Lumberdarce-huq, when these lands might come under assessment.

36.—The following statement exhibits the quantity of land now held rent-free.

Statement of rent-free Lands. Six (6) beegahs have been resumed since the settlement in four villages, on the death of four Putails, as per margin,* and I would respectfully solicit permission to restore these lands to the

* Chumpa Putail, Rhagmal, 2 beegahs. Bukhta Putail, Bhoygakan, 2 beegahs. Doorga Bunjaree, 1 beegah. Jussa Mowasa, 1 beegah. successors of the deceased holders for the period of the settlement.—

Territory.	Irrigated.		Not Irrigated.		Total.		Remarks.
	Beegahs.	Biswahs.	Beegahs.	Biswahs.	Beegahs.	Biswahs.	
Ajmere Mhairwara,	31	5	20	15	25	"	The Mhairwara beegah is equal to 1,764 square yards.
Meywar ditto,	27	17	17	10	45	7	
Marwar ditto, ...	"	"	"	"	"	"	
Total Beegahs,	52	2	38	5	97	7	

37.—The "Mapa" tax in Mhairwara is a source of much annoyance, to which I would draw attention. It is, in fact, a tax upon *barter*. Half a pice or about 3 pic is taken per Rupee, on the value of all goods bought and sold. It is taken on grain, cloth, opium, produce of all sorts, groceries and cattle. I believe cows are the only exception. The late Officiating Deputy Commissioner, Captain Brooke, noticed it in the following terms in a report upon the Customs, No. 222 of 1858, dated 13th October:—"Every where in Mhairwara, the objectionable *Mapa* tax is levied at every village. It interferes with every transaction of life,

"and further necessitates the maintenance of 133 Bhulloneas, or Agents, all with "Government seals." This tax is confined to Mhairwara, having long ago been abolished in Ajmere. It is a source of constant complaint. Its realization is uncertain and difficult, since it is easily evaded, and there is little check upon the parties employed to collect it. The average revenue derived from this source for the past five years, is only Rs. 1,100 per annum, and feeling convinced that it would be both wise and politic were Government to sanction its entire remission for the future, I venture to recommend its discontinuance to favorable consideration.

38.—I may mention for the sake of record, an incident that occurred during my tour in Mhairwara. A rumour had gone abroad, that Incident exhibiting feeling of the Mhairs. the portions of the district appertaining to Meywar and Marwar were about to be restored to the management of the respective Durbars. This was brought to my notice by a number of the Putails and Elders of the Todgurh and Saroth pergunnahs, who waited upon me one evening in a body, to ask if the report was true. They stated, that the British were the first nation to whom they had submitted; that they had been happy and comfortable under their Government, to which they would adhere under any and all circumstances, but that it would be impossible for them to submit to the change of rule which they had heard was impending. My assurances, that no such measure was in contemplation, were received with evidently genuine satisfaction. There is, in fact, little room to doubt that any such change would be followed by an immediate return to their old predatory habits.

39.—On the subject of Education, I am called upon to say but little, since the schools are under the sole control of the Superintendent Education. of the Ajmere Government School, Mr. Fallon, and I am also not aware what correspondence on the subject has taken place between the Director General of Public Instruction and yourself, with reference to the observations contained in paragraph 10, of letter No. 4648, dated 20th October 1859, from the Secretary to Government, North Western Provinces.

40.—It may be right however to mention, that the Mhairs generally exhibit an inclination to learn, and some of them are now qualifying to take the post of Putwaree. I would gladly see the Village schools, in the more distant parts of Mhairwara at least, placed under the Tehseeldars, whose acquaintance with the people, and their habits and wants, would enable them to exercise a better influence and control than the Visitors occasionally detached from the Ajmere School can possibly do.

41.—The Istimrardar Chiefs who occupy so large a portion of Ajmere, were Istimrardar Chiefs of nearly all visited during the past year on their own estates, Ajmere. and it was satisfactory to find them generally in improving circumstances, and endeavouring to improve their property. The Thakoor of Mussooda has just completed a magnificent new Tank of pucea masonry, which will rival some of the large Government works in Ajmere. Every encouragement should be given

to induce these Chiefs to construct such works, and Tuccavee advances for the purpose would be well employed, even to the amount of, say half, the estimated outlay.

42.—The amicable settlement of the disputes in regard to the increased demand from the Talooka of Sawar, has been reported separately.

43.—The Revenue Accounts for the year will be submitted as soon after the 1st proximo as practicable.

B. P. LLOYD,

*Deputy Commissioner,
Ajmere and Mhairwara.*

Rules for conducting the "Teep" or revision and correction of the Settlement Records in Ajmere.

1st.—Since the Settlement, great changes have occurred, which have not been recorded, and errors in the original record have been found to exist, which have never been corrected; consequently the settlement papers of many mehals contain no faithful record of existing rights. The general nature of these changes is as follows:—It frequently happens that several fields bearing separate numbers in the Khusreh and Sujhrah have been thrown into one, and the "mends" or divisions are extinct; or the reverse has frequently happened, and a large field has been divided into several smaller ones, and again portions of several separate fields have been formed into one or more new lots, the old boundaries being destroyed. In most imperfect pulteedaree villages too, lands recorded at the settlement as common, have been taken in and annexed to individual holdings, without notice or record. Thus the nature and extent of the holdings of some proprietors have undergone important changes, by which the interests of the whole are affected. Wells have been dug, and tanks or "narees" (small earthen embankments) constructed, which have also led to important changes in the value of property, and these are as yet unrecorded. The Huftgan papers of the Putwarees, in which such alterations in mehals should have been entered, have been found to be wholly imperfect and useless, and there is, in fact, no record of proprietary rights as they now stand which can be depended upon.

2nd.—It is believed that, through the agency of the Putwarees who have been recently appointed on the Hulkabundee system, and carefully instructed in their duties, a means of remedying this state of things is at hand, and that under the supervision of the Tehseel establishments, a new and correct record of existing rights may be framed by them without difficulty or much delay, and without expence to the State. The following rules have been drawn up for the purpose:

3rd.—The fields of each mchal must be carefully compared with the Shujrah and Khusreh of the Settlement, in regular series, commencing from No. I. As regards those fields which correspond with the old record, it will suffice to enter the word “ba-dustoor” in the new “Teep Khusreh,” a form of which will be given below, but where alterations in the shape of fields, or in the quality of land have taken place, the present condition of things will be recorded in the proper columns. Where the old boundaries of fields are extant, no fresh measurements need be made.

4th.—Great care must be taken in entering the names of proprietors. If, since the settlement, a field has changed hands, it must be noted in the column of Remarks, opposite to the parcel of land in question by what means it was transferred from the original recorded proprietor to the present possessor; whether by inheritance, sale, or mortgage, &c., or in consequence of a partition among co-proprietors, or of the possessor having absconded. If the original entry was erroneous, it should be so stated.

5th.—In cases where two or more fields belonging to one proprietor have been thrown together into one parcel, all the old numbers must be entered in the proper column, the total area of the whole being entered in the Area column. Any difference in quantity between this amount and the aggregate area of all the numbers included as recorded at the Settlement, should be noticed in the column of Remarks. If the external boundaries of the several parcels are extant, and correspond with the Settlement record, no fresh measurement is requisite. If any field so incorporated with others is mortgaged, notice of the mortgage is to be made.

6th.—Where a field has been divided, since the settlement, into two or more smaller plots, the original Settlement number must be preserved, whether the land be held by the same, or different proprietors, but the area of each separate plot will be shown in the Area column; and opposite, in the column of Remarks, the new subordinate numbers, with such observations as may be necessary.

7th.—Where any portion of “shamilat” or common land has been added to a field belonging to a holder in severalty, the boundary “mends” of the latter should be re-constructed, as at the time of settlement, and the shamilat land separated from it. The area of this last will be entered under a subordinate number with the rest of the shamilat, and in the column of the “Name of proprietor,” the word “Shamilat.”

8th.—In some instances it has happened, that several proprietors have agreed to dig a well, or make a “Naree” (or small tank,) and for this, or similar purposes, the original “mends” or boundaries of several fields have been obliterated, but subsequently the land has been again divided into parcels, entirely different from those of the settlement. Here it will be necessary to compare the land with the original Sujrah. (The original fields should be marked with stones, or temporary marks to enable the comparison to be made.) The different portions of the original fields forming each new one will be noted, and the

Comparison of Fields with Records.

Changes in proprietorship.

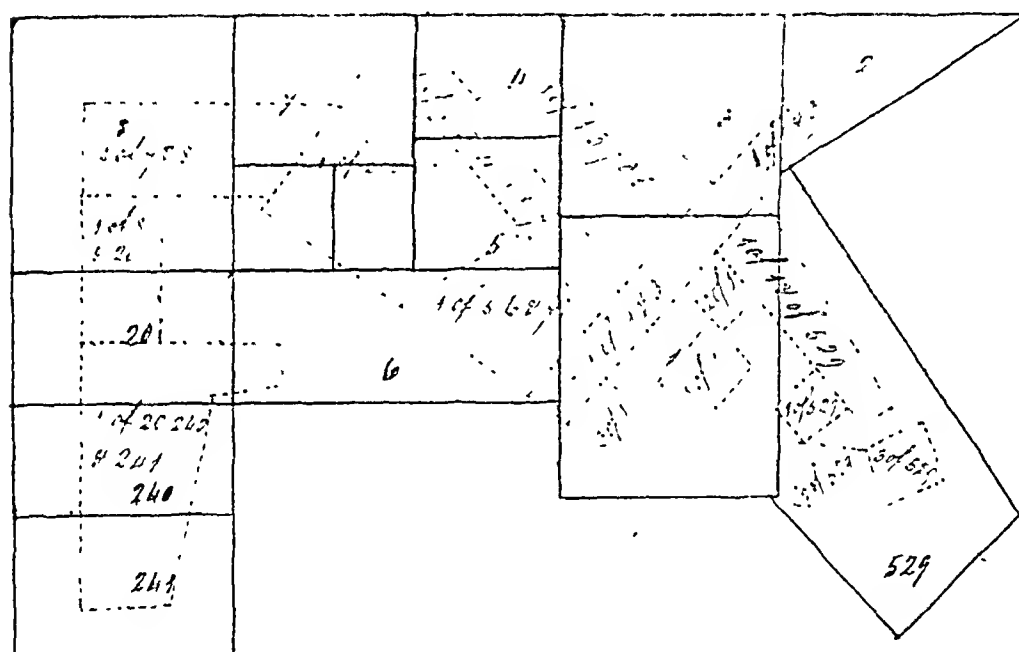
Cases where two or more old fields have been formed in one new one.

Cases where one old field has been divided into two or more new ones.

Where common land has been taken in.

* Where several old fields have been broken up and new ones formed.

the Khusteh as a subordinate number of those original numbers which contributed to its formation. The boundaries and area of the new parcel are to be entered, and it must be noted that it has been formed from so much land from such an original number, and so much from such another. After deducting from the area of the fields to which they originally belonged, such lands as have been separated to form new lots, the remainder will be entered under their old numbers. A supplementary Shujrah for these lands *only* must then be constructed, shewing the old fields and numbers in black ink, and the new ones formed from them in red ink, in the method shewn below:—



9th.—Fields situated in front of the bund of a tank, which are within reach

of the water, and either remain wholly submerged, or usually only become dry when the season is too far advanced for cultivation, will be noted accordingly in the column

of Remarks. If there are fields which, since the settlement, have become unproductive, and have been thrown out of cultivation, or have deteriorated in a less degree, the exact circumstances must be carefully noted opposite to each number in the column of Remarks. If only a portion of a field has deteriorated, the quantity will be entered. Similarly, where, by construction of wells or "Narees," inferior land has been made to produce more remunerative crops, as poppies, sugar-cane or roses, mention will be made. In respect to assessed lands liable to prolonged submersion,

it is hoped that hereafter they may be transferred to the common land by exchanges, so that the loss may be evenly distributed.

10th.—For the above purposes, the annexed forms of 'Khusreh' and 'Khuteones' have been prepared.

11th.—Putwarees acquainted with the Persian character will employ it ; otherwise the papers will be in Hindee. The Putails will accompany the Putwarees in their work, and every zemindar must be present while the lands in which he has an interest are under examination. It is believed that, as a general rule, no difficulty will be experienced on this head ; but should it be necessary, the Tehseeldar will station a muzkooree peon in the village to attend the Putwaree, and all such expenses, as well as the cost of the stationery used by the Putwaree, will be defrayed by the villages concerned.

12th.—Previous to the commencement of the "Teep" in any village, the Tehseeldar will cause it to be proclaimed on three separate occasions : that it is incumbent on all parties to give full information respecting their lands and rights during the operation, otherwise their claims will not be listened to hereafter. If disputes should happen, the cause of which has arisen since the settlement, the cases will be decided summarily. If the cause of action arose prior to the settlement, the plaintiff will be referred to a regular suit.

13th.—The Tehseeldars will send Weekly Reports of progress. The average daily work should not be less than 150 fields per diem ; but at first this number may not be attained, and the work should on no account be unduly hurried, lest it should lead to inaccurate or fictitious entries. The Deputy Collector will send on the Weekly Statements for the inspection of the Deputy Commissioner, with his remarks entered on them.

14th.—The Tehseeldar will purtal (or test) the Putwaree's work to such extent as may be practicable, but usually not less than 10 per cent. in each mouzah. The quantity of work of this nature will be reported weekly. Those cases in which "shamilat," or land held in common, has been amalgamated with khewut (or divided) land, will require particular attention. On completing the purtal of a village, the Tehseeldar will affix his signature to each page of the Teep-khusreh. The word 'ayzun' (ditto) must not be permitted in the Khusreh, but the quantities and qualities of lands must be distinctly written in all cases.

15th.—The Purтал Report to be furnished by the Tehseeldars, will be in the annexed form.

16th.—When the Khusreh is complete and a shujrah of such portions of the village as may require it, it will be forwarded by the Tehseeldar to the Deputy Collector, who will satisfy himself of the accuracy of the work by purtalling as he thinks necessary. The Deputy Collector will superintend the stages, and move about the district for the purpose as may be required.

17th.—Putwarees who distinguish themselves by their exertions will be reported by the Tehseeldars and Deputy Collectors to the Deputy Commissioner, in view to their being promoted or rewarded as may be deemed proper.

Khusreh.

Now.										REMARKS.
Name of Cultivator.	What period the Kashtkar has been in possession.	Name of Field.	Area.						Quality of Land.	
			Length.		Breadth.		Area.			
			North.	South.	East.	West.	Beegahs.	Biswahs.		
Bijja, son of Mukna, the proprietor,	"	Bundea,	0	0	0	0	4	0	Talabee ek Fuslee.	This land is ek Fuslee from former times.
Ditto, ...	"	Ditto, ...	40	40	40	40	4	0	Chabee do Fuslee,	This land has been divided.
Rama, son of Jodha, the proprietor,	"	Ditto, ...	40	40	40	40	4	0	Ditto, ..	Ditto.
Oomeda, son of Jodha, the proprietor,	"	Ditto, ...	122	122	150	150	46	5	Abee, ...	This plot of land has been newly formed, and the land out of the undermentioned numbered Fields has been included in it.
										From Beegahs. Biswas.
										No. 3 16
										" 5 8 17
										" 6 10 "
										" 7 4 "
										" 8 7 8
										Total 46 5
Rama, ... 33 years,		Khera, ...	0	0	0	0	3	10	Chabee do Fuslee.	New Well has been constructed.
Shera Mairat, the proprietor, ...	"	Ditto, ...	23	20	20	20	1	3	Ditto, ...	Out of this land 8 beegahs and 17 biswahs has been included in No. 3.
Ditto, ...	"	Ditto, ...	100	100	20	20	5	0	Baranee, ...	} Included in No. 3.
Ujba, the proprietor,	"	Ditto, ...	100	100	20	20	5	0	Ditto, ...	
Ditto, ...	"	Ditto, ...	120	120	40	40	12	0	Ditto, ...	Out of this, 4 beegahs has been included in No. 3.
Ditto, ...	"	Ditto, ...	79	81	50	30	8	0	Ditto, ...	

B. P. LLOYD,

uty Gen

Statement of Remissions for which sanction is solicited for the Year 1267 Fustee, or 1859-60, in the Districts of Ajmere and Mhairwara.

No.	District.	Pergunnah.	Village.	Settlement Jumma.	Amount of Remissions.	REMARKS.
1	Ajmere,	Ramsur,	Bahera,	1,160 0 0	80 0 0	From the excessive rains, four wells were completely carried away by a stream, and the loss as stated was incurred. The rubbee crops in this village are very poor, and the kharoof was rotted. The zemindars are poor, and cannot make good the loss, owing to the deficient harvests.
2	Ditto,	Ditto,	Luchepoor,	380 0 0	50 0 0	This is a new hamlet, in which the villagers are very poor. It is highly assessed, and both crops failed. The remission sought is indispensable.
3	Ditto,	Ditto,	Soolca,	708 0 0	100 0 0	The tank in this village burst from excessive rain, the kharoof was spoiled, and the rubbee crop was very scanty, owing to the want of water. The village is highly assessed, and very poor.
4	Ditto,	Ditto,	Nearan,	7,000 0 0	1,000 0 0	<i>Vide</i> explanation in accompanying Report, paragraph 19.
5	Ditto,	Pohkur,	Kanus,	310 0 0	50 0 0	This village is poor, and 123 beegahs were partially submerged, by which 20 beegahs of sugar-cane were greatly damaged. The Settlement jumma is high, and the remission of Rs. 50 is strongly recommended.
6	"		Bh aonta,	2,444 0 0	437 0 0	In consequence of the heavy rains and overflowing of the Sagarmuttee River, 337 beegahs of irrigated land have become totally unproductive from salt and sand. The village is quite unable to meet this loss, and remission is necessary to the extent indicated.
Total Remissions in Ajmere District,					1,717 0 0	
1	Mhairwara,	Deasur,	Singon,	700 0 0	100 0 0	This village has suffered very severely from the submersion of lands. The total loss from this cause is estimated at Rs. 400, but other lands have been brought under cultivation, and the net loss is calculated at about Rs. 100, for which remission is sought.
2	Ditto,	Ditto,	Sohara,	775 0 0	75 0 0	Both tanks.

Statement of Remissions for which sanction is solicited for the Year 1267 Fuzlee, or 1859-60, in the Districts of Ajmere and Mhairwara.

No.	District.	Pergunnah.	Village.	Settlement Jumma.	Amount of Remissions.	REMARKS.
3	Mhairwara,	Beawur,	Mandawas,	500' 0 0	50 0 0	80 beegahs of land have become unproductive from submersion and saline efflorescence. The village is poor and highly assessed, and relief to the extent indicated is considered absolutely necessary.
4	Ditto,	Ditto,	Futtehpoor,	569 0 0	50 0 0	The water in this village has become salt, and the khureef was ruined. The village is small, and the inhabitants very poor.
5	Ditto,	Ditto,	Kampoore and Kalee Kankur,	325 0 0	140 0 0	This is a small khera on the margin of the Kalee Kunkur Lake; 113 beegahs remained totally submerged. Permanent relief will be required, and will be solicited hereafter. The village is very poor, and quite unable to meet the loss above shewn.
6	Ditto,	Ditto,	Lamba Per- tabpoora,	310 0 0	80 0 0	These are two newly-located hamlets, very poor and heavily assessed. They have suffered from submersion, and the defection of cultivators. The relief solicited is indispensable.
7	Ditto,	Ditto,	Kalawas Bho- wany khera,	280 0 0	80 0 0	Lands cut away by the force of the stream, the villagers are wretchedly poor, and this relief is the least that should be given.
8	Ditto,	Ditto,	Bulad,	1,800 0 0	300 0 0	This village is very heavily assessed. The average jumma realized under Kham management for 13 years, prior to the settlements, was 1,715. The village has deteriorated, and has this year suffered from the submersion of lands. I strongly recommend the remission indicated.
9	Ditto,	Sarothe,	Barcea Heera,	350 0 0	175 0 0	The tank of this village burst, and much land was rendered unproductive. The village is situated in the hills and very poor. Formerly the zemindars were notorious robbers and cattle-lifters. It is most desirable not to subject them to pressure, or they will return to their old habits. I strongly recommend the remission indicated for the current year. The tank is under repair.

*Statement of Remissions for which sanction is solicited for the Year 1267 Fustee, or 1859-60, in the
Districts of Ajmere and Mhairwara.*

No.	District.	Pergunnah.	Village.	Settlement Jumma.	Amount of Remissions.	REMARKS.
10	Mhairwara,	Saroth,	Jeitgurb,	2,257 0 0	300 0 0	This village has suffered from a combination of untoward circumstances. The Putail, a very energetic man, went out of his mind : during his illness disension sprang up. The village has deteriorated in consequence. Measures are in progress to locate a new khera on the culturable waste ; but I would solicit relief as shewn for this year, to enable the village to recover itself.
11	Ditto,	Ditto,	Barhmer- poora,	1,500 0 0	300 0 0	This village is very highly assessed, and has deteriorated, and permanent remission will be sought hereafter : it has this year suffered severely from heavy hail. I strongly recommend the remission of Rs. 300.
12	Ditto,	Ditto,	Jowaja,	1,800 0 0	87 6 1	In rear of the bund of this village, extensive saline efflorescence has occurred, rendering the lands unproductive. The loss was estimated after careful survey at Rs. 87-6-1 ; and as the village is very poor and unable to meet it, I recommend remission of this sum.
13	Ditto,	Ditto,	Bugwan- poora,	350 0 0	80 0 0	Village situated in front of Towaja tank, and suffered from excessive rains, by which the khureef was partially destroyed. Village very poor.
14	Ditto,	Ditto,	Soo rujpoora,	755 0 0	100 0 0	Village very poor, having suffered from submersion for several successive seasons.
Total emissions in Mhairwara District, ...				...	1,917 6 1	
Grand Total Remissions, ...				...	3,634 6 1	

AJMERE:

DEPUTY COMMISSIONER'S OFFICE,

The 28th May 1860.

B. P. LLOYD,

Deputy Commissioner,

Ajmere Mhairwara.

From G. COUPER, Esq., Secretary to Government, North Western Provinces, to the OFFICIATING COMMISSIONER of Ajmere. Dated Nyneco Tal, the 16th July 1860. (No. 815 A.)

I am directed to acknowledge the receipt of your letter No. 77, dated the 12th ultimo, with which is transmitted a very comprehensive and interesting Report from Major Lloyd, Deputy Commissioner of Ajmere, on the present condition and future prospects of his charge, and on various points more or less closely connected with its interests and management.

2.—In reply I am desired to observe, that it is satisfactory to learn, that on the whole, the rainy season of 1859 was favorable to agricultural industry, and that the crops were but little damaged by the vicissitudes of the season.

Paras. 3, 4, 5 of Major Lloyd's Report.

3.—The facts stated by Major Lloyd in the 4th paragraph of his letter are suggestive and interesting, and shew that Colonel Dixon conferred upon the Province which he administered for many years, benefits more various and more lasting than were perhaps contemplated at the time.

4.—The Lieutenant Governor is glad to be informed that Major Lloyd has been able, even though imperfectly, to fulfil the instruction which were conveyed to him relative to losses caused to individual proprietors by the submersion of their lands, and to the re-adjustment of the Government demands on estates, where the profits had become diminished by the same cause below the jumma fixed at the settlement.

Para. 6, *Ibid.*

5.—His Honor entirely approves of Major Lloyd's resolution, to revise and amend the Maps and the Record of Rights which were framed at the settlement, in such a manner that the changes in the distribution of the area, and the mutations of property which have since taken place, may be traceable. This measure, I am to observe, if carried out under close supervision, cannot but be most beneficial to the people, and to the Officers of the Government; to the former in the protection which it will afford to their rights and their interests, and to the latter in the facility which it will give to the equitable decision of disputes regarding possession and the incidence of the Government demand, as well as to the administration generally.

Paras. 8 to 16, *Ibid.*

6.—The Rules drawn out by Major Lloyd are generally approved. But he must bear in mind, that unless the co-operation of the people is secured, no undertaking of this kind can be successful; and the only way in which this co-operation can be obtained is by convincing the people that their own rights and interests are immediately concerned in the compilation of the desired Record with the utmost attainable accuracy.

7.—The redistribution of the jama where it is proved to press unequally, will be a very necessary and important sequel to the rectification of the Field Maps and Record of right and possession; and Major Lloyd, His Honor is glad to observe, has rightly resolved that this part of the measure shall, as far as possible, be accomplished by the people themselves.

8.—The Lieutenant Governor has no apprehension, that in Major Lloyd's hands the operation now contemplated will fail. His zeal, ability, and familiarity with the character and customs of the people with whom he has to deal, are the best guarantees for success, and His Honor looks forward with confidence to a report at the proper time of favorable progress.

9.—The Lieutenant Governor has examined the reasons assigned in the Para. 17 of Major Statement appended to Major Lloyd's Report, for the several remissions which he has recommended, and has no doubt as to the propriety of his proposals. He has, therefore, been pleased to sanction the remissions proposed for 1859-60, amounting to Rs. 3,631-6-6. In those cases in which the deficiency of assets is traceable to accidental causes, as the breaking of a tank bund, submersion of lands, saline efflorescence, destruction of crops, and so forth, the relief for the single year will probably suffice. But where, as in Bulad No. 8, and Barhmeerpoor No. 11, over-assessment is known to exist, the more radical remedy of a revision of assessment, and summary settlement for the remaining term of the settlement, would seem to be required.

10.—The case of Nearee in Ajmere is a case in point. From the state of prosperity to which this village was suddenly raised by the construction of the Tank mentioned, it has been reduced by the exhaustion of the soil to a condition in which its assets are insufficient to meet the heavily increased demand which was imposed upon it, in the expectation that the productiveness of its lands would continue undiminished. It is obvious that, in such a case, something more than temporary relief is needed, and the Lieutenant Governor is glad to observe, that Major Lloyd is about to bring the settlement under revision.

11.—These paragraphs call for no particular remark. The importance of keeping the Irrigation works in thorough repair is fully understood Paras. 20 to 21, *Ibid.* as well by the people as by Major Lloyd, and the funds available for this purpose appear to be ample in ordinary times and circumstances. Major Lloyd, of course, acted quite rightly in dispensing with the contribution of the Government, on finding that what was required could be accomplished without it.

12.—The facts stated by Major Lloyd in this paragraph are sufficient to show that the project of excavating a new Cut at Ramsur may be properly abandoned. Para. 25.

13.—Major Lloyd's proposal for the appointment of an European Officer, under whatever designation, to discharge the duties which Mr. McCulloch was intended to fulfil is fully approved; and, on the assumption that the sanction given by the resolution of the Governor Paras. 26 and 27.

General in Council, No. 857, dated 1st April 1853, is still in force, Major Lloyd is authorized to take steps for securing the services of some competent person. Captain MacLagan, the Principal of the Thomason College at Roorkee, is better able than any other Officer of the Government to aid him in the selection.

14.—The Lieutenant Governor does not think that this person should be denominated Extra Assistant to the Deputy Commissioner, or that he should be invested with the judicial and fiscal powers which that designation implies. His title might be "Supervisor of Irrigation Works in Ajmere and Mhairwara;" he will of course be in complete and direct subordination to the Deputy Commissioner, and his duties will be confined, in the first instance, to aiding in the Superintendence of Irrigation Works, construction of roads, drains, bridges, and so forth. If the person so appointed should exhibit an aptitude for administrative work, it may become a matter of future consideration, whether he may not be vested with powers which shall enable him to aid the Deputy Commissioner in the transaction of the general business of the district.

15.—Major Lloyd's account of the extent to which his own personal recollections enable him to mark the immense material and social improvement which has taken place in Ajmere and Mhairwara is peculiarly gratifying, as furnishing the best evidence of the success of those beneficent measures, of which the late Colonel Dixon was the prime mover, and the principal agent. The result amply rewards the Government for the liberal encouragement which it gave to Colonel Dixon's projects and exertions in the cause of civilization, and points the way which it may wisely follow in dealing with other tracts of country which equally call for its special care and attention.

16.—On the points to which these paragraphs relate, there is little room for hesitation. A small patch of rent-free land, held under direct sanction of the Government for (*quasi*) official service, is estimated by the people of this country at much more than its pecuniary value, and the Lieutenant Governor has no doubt that the continuance of these holdings is better calculated to awake the good-will and cordial co-operation of the Putails than a stipendiary allowance, such as Huq-lumberdaree. At the same time the cost to the Government in the loss of revenue is much less than the assignment of adequate Huq-lumberdaree would involve; and His Honor is of opinion, that even at the next settlement it will be a very doubtful policy to substitute the latter for the system of remuneration which seems to have existed from the earliest times in Mhairwara.

17.—The patches of rent-free land which are reported by Major Lloyd in his 36th paragraph to have been resumed, may be restored, and an assurance may be given to all incumbents in such tenures, that during the period of the current settlement, at least, they will not be interfered with or disturbed.

18.—The Massa Tax in Mhairwara which is here alluded to, has been abolished by recent Orders No. 1 A. dated 20th ultimo, issued in reply to a report of the Government of Ajmere and Mhairwara, and nothing more to be reported.

ART. VII.

REPORT ON A SPECIES OF PALSY PREVALENT IN PERGUNNAH KHYRAGURH, IN ZILLAH ALLAHABAD, FROM THE USE OF KESSAREE DAL, AS AN ARTICLE OF FOOD.

In a Report dated 30th March 1857, I drew attention to the prevalence of what I considered to be a species of Palsy that prevailed in Barrah, a pergunnah of the Allahabad district, and which was supposed to be caused by the people living on Kessaree dal, a vetch known to botanists as *Lathyrus sativus*. The present Report refers to the same disease, as it appears in Khyragurh, a pergunnah of Allahabad, situated on the other side of the Tons river, and adjoining Barrah.

Marches made in Khyragurh.—On the 24th January of this year, I joined the camp of Mr. Court at Katka, on the banks of the Tons, and the same day we marched to Mejah, where the Tehseeldaree of Khyragurh is situated. Hitherto we had passed through a fine country, with rich soil, and bearing abundant crops. At Mejah, on enquiring for cases of Gutteea, which is the name applied by the natives to this kind of Palsy, I was told that there were a few examples, but the only one brought to me was a case of the ordinary Palsy. Leaving Mejah next morning, we passed over a low range of rocky hills, and came to Koraon. On the march we observed much black marl soil, and found Kessaree dal growing in profusion. The ground in many places round Koraon is swampy, tanks abound, and the water of these the people drink. On the surface of the soil, in many places, an efflorescence of nitre was noticed. The following morning we came to Larcearee. The soil, as before, was of dark marl; Kessaree was plentiful as a crop, and cripples were noticed in most of the villages we passed. In proceeding next day, a distance of six miles, to Keeree, we traversed a poorer-looking part of the country than we had hitherto done. The soil, as before, was marly, and there seemed to be hardly any other crop at this season than the poisonous vetch. In many places, there were large tracts of uncultivated land covered with low jungle bushes. We observed many cripples. Next day we crossed the Tons, and in doing so entered pergunnah Barrah. Bad as the soil of Khyragurh had gradually become, as we were approaching Barrah the change for the worse was very evident on entering the latter pergunnah. The ground was everywhere split into deep black marl soil crumbled in the hand, and the ground was everywhere split into deep fissures, and large hollows, as if so much of the surface soil had sunk down from the action of water. Cultivation was carried on to a trifling extent, but the crops seemed scanty, and consisted chiefly of Kessaree dal. We passed

On the 30th of January we arrived at Barrah. On the road thither, we passed many ruined and deserted villages, and observed the usual black, dry, cracked soil, the country abounding in tanks, Kessaree dal, and lame villagers. Next day we proceeded to Kurma, in pergunnah Arail, and found the soil and crops steadily improving as we advanced; and we saw no paralytics. The crops were not, as in Barrah at this season, confined almost exclusively to Kessaree and Gram, but were varied by a plentiful admixture of barley and wheat.

General Appearance of the Country.—Such is a sketch of the extent of my marches in Khyragurh and Barrah, during the nine days that I was out in camp with Mr. Court in the past cold season. The appearance of the soil alone was sufficient to indicate what crops one might expect; and if it were of dark marl, one might be equally certain that Kessaree, or as it is otherwise called “Chuptooa Mnttur,” would, at this season, be the prevailing crop; and that where one found this soil and this crop, one might look with a certainty of finding men crippled in their legs, in the surrounding villages, or in their neighbourhood. The people of Khyragurh and Barrah appear to drink tank water. These tanks are very numerous all over this part of the country; so numerous, indeed, that they cannot be intended for holding drinking water only, but are probably intended to drain particular pieces of land, and also for purposes of irrigation in the hot weather. Wells appeared to be comparatively rare, and, in such as existed, the water was found close to the surface: that is to say, within eight or nine feet of it. In some parts of the country that we passed through, there is a stratum of stone a short distance beneath the soil, which would render well-sinking difficult and expensive; but this cannot be the only reason that wells are so scarce, for in places where there is no substratum of stone, and where the water is close to the surface, we only met with tanks. From what has been said of the soil and water of Khyragurh, it may be inferred that, in the rainy season, the country must be almost entirely covered with water, and this I believe is the case.

Crops.—The Khureef crop in the portions of Khyragurh in which paralytics are found, consists of cotton, which is produced in considerable quantity; Kodo is also largely cultivated, while joar and bajra are produced in comparatively small quantities. The principal crop at this season is a coarse, but very productive, kind of rice called *Sathee*. The Rubbee crop consists of wheat and barley in small quantity, and which do not come to perfection. In all parts of Khyragurh and Barrah in which I have seen these grains growing on the marl soil, they seemed to be stunted in the growth of the stalk; the heads were unproductive, and the grains were dark-colored and small in size. As Rubbee crops, we have also gram, linseed, Urhur dal, and lastly, and chiefly, Kessaree dal. In my former Report it was stated, that Kessaree formed the principal food of the people of Barrah for a great part of the year, being the cheapest; that it required little or no cultivation, no labor or trouble to produce it, and that it grows on damp, swampy soil that would bear no other crops. The ground merely requires to be lightly ploughed once, and the seed is then thrown; when it speedily germinates, and comes to perfection without

further interference on the part of the cultivator. Mr. Court, in the letter which forwarded my former Report to Government, has stated that Kessaree grows in all seasons, varying in luxuriousness of growth only according to the season, and affording the only certain provision of life in Barrah. All this applies with equal force in the case of those parts of Khyragurh in which cases of Palsy occur.

Extent of Palsy in Khyragurh.—When out in the district, every opportunity was taken to enquire into the amount of lameness in the various villages, and to ascertain from those affected, the history of their cases, as well as the prevalent notions of the people generally, as to the nature of a malady which disables so many otherwise healthy men. The following table, compiled from returns which Mr. Court very kindly directed the Tehseeldar to draw out, exhibits the extent to which Palsy prevails in Khyragurh:—

TABLE.

Talooka.	Population.	Number of Paralyties.	Percentage of Paralyties to Population.
Chowrassee, ...	6,760	31	0.43
Barokhur, ..	9,194	146	1.58
Kohrar, ...	10,120	109	1.07
Dyah, ...	15,722	251	1.59
Mara, ...	20,789	102	0.48
Khurkha, ...	8,215	250	3.04
Total, ...	70,800	889	1.25

The disease is thus much less prevalent than in Barrah, in which pergunnah, out of a population of 56,649, as given by the Tehseeldar in January of this year, 2,221 were paralyzed, or 3.92 per. cent.

The table above shows clearly, too, that all the Talookas of Khyragurh do not suffer in equal proportions; and in fact it would be found, that cases of Palsy in particular places, are in exact proportion to the quantity of Kessaree dal cultivated. My impression, from what I saw is, that in the table the amount of Palsy in Khyragurh is under-stated.

At Koraon I spoke with some forty or fifty cripples, who had been assembled there from all the surrounding villages. Many of them called their complaint rheumatism, and appeared to imagine that it was occasioned by a noxious wind (*khur hawa*) that blows in the rains. Others spoke of the deleterious properties of water during the rains as the cause, or at all events, a cause of the affection. *One who has spoken to natives about the origin or cause of an* knows how prominent are the parts that bad wind and bad water

them, and of heat (gurmec) they appear to account for all manner of diseases. Others spoke of their feeding on Kessaree as the cause of their Palsy. Their ideas were not at all clear as to the agency of bad wind, bad water, and Kessaree dal, respectively, in producing the disease in any case; nor could I discover whether they considered that bad wind or bad water alone would give rise to Palsy in one who did not use the poisonous grain. One man said one thing, and another the reverse. Here, as at Barraha, many spoke of the suddenness of their seizure, and several said how they had been working in the fields during the rains, when they all at once felt pain in the loins, as if rheumatism had seized them. An old man asserted, and many others told me the same thing, viz., that the disease is only produced in particular years; the theory being, that it is only in those years that the "khrab hawa" prevails. There would appear, however, to be no foundation for this statement; for, of the cripples I examined at Koraon, the year in which they stated they had become lame, was too various to admit of the idea above alluded to being true.

The following are given as examples of the cases seen at Koraon:—

1st.—Dussoobbee, chumar, aged 35, inhabitant of Purruree, has been lame five months; he was working in a rice khet during last rainy season, and had sat down, when suddenly he found that he was unable to raise himself. He felt no actual pain at the time, but now his knees and loins ache when he rises from a sitting position to the erect posture. He used to eat, and still eats Kessaree.

2nd.—Jowhahir, koonbee, aged 50, an inhabitant of Chokundee village, has been lame for three years. He was working in the fields during the rains, when he became lame. He had no fever, or other illness before he became so. This, all the paralytics that I have examined assert likewise. He used to eat Kessaree, and still does so.

3rd.—Emambux, mussulman, aged 40, inhabitant of Koraon, states that he was labouring in the fields during the rains about three years ago, when he became lame all of a sudden, and has so remained. He used to eat Kessaree, and still does so.

4th.—Sheonundun, aged 10 years, has been lame since last rains. He was tending cattle in the rains, when he became so. He, too, has always lived on Kessaree.

5th.—Bison Lall, brahmin, aged 60, has been lame for two years. He has always lived principally on Kessaree, and still does so. This man stated, that since he became paralyzed he has felt pain in the loins, but nowhere else.

General Symptoms.—These short histories correspond exactly with those given in my previous Report. The characteristics of the affection appear to be—the generally sudden seizure of the patient; the time of seizure—the rainy season; the absence of any accompanying fever, or other acute disease; the absence of pain, except in the knees and loins, and that only when they attempt to walk. The affected do not appear to fall off much, if at all, in condition, in consequence of the disease, nor, so far as I could judge, did the legs fall away, as one would have expected. There seems to be no blunting of sensation. I pinched equally hard an arm and an affected leg of the same person, in many different instances, but all said that

they felt it as much in the leg as in the arm. Bison Lall, whose case is given above, as well as several others, have told me, that they feel cold, from the loins downwards, more acutely now, than they did before they became lame. Others complained of a tingling sensation in the legs.

Affects Men more than Women.—A peculiarity of the disease is, that it affects men more commonly than women. Thus it appears, from a return kindly furnished me by Mr. Court, that in Barrah at the beginning of this year, of a population of 33,951 males, 2,037 are paralyzed, or 6.11 per cent.; while of 22,658 females, only 134, or 0.59 per cent. are affected. According to this return, the total population of Barrah in January was 56,649, of whom 2,221 are paralyzed, or 3.92 per cent.* The same fact is apparent in the return from Khyragurh.

TABLE.

Taloka.	Population.			Paralytic.			Rates per cent. of Paralytics to Population.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Chowrassee, ...	3,533	3,217	6,760	26	5	31	0.73	0.15	0.43
Burokhur, ...	3,855	5,339	9,194	139	7	146	3.60	0.13	1.58
Kohrar, ...	5,171	4,919	10,120	107	2	109	2.06	0.04	1.07
Dyah, ...	8,973	6,749	15,722	238	13	251	2.65	0.19	1.59
Mara, ...	10,666	10,123	20,789	93	4	107	0.8	0.01	0.48
Khupka, ...	4,098	4,117	8,215	239	11	250	5.83	0.26	0.04
Total, ...	36,296	22,504	70,800	842	42	884	2.31	0.18	1.25

Mr. C. B. Thornhill was good enough to obtain for me a return of paralytics in chowkee Burgah, pergunnah Mow, zillah Banda. From this it appears that there are in this part of that district, 2,964 men, of whom 199, or 6.71 are paralyzed; and that of 2,562 women, 11, or only 0.43, are affected.

Prevalence over India.—Of this affection, I have found various traces in other parts of India, besides those given in my former Report. In the part of pergunnah Kurchannah of the Allahabad district which joins on to Barrah, and possesses the same soil, we have a few cases,†

Banda.—I had hoped to give some interesting details regarding the prevalence of Palsy in other parts of Banda. But after waiting a long time for a translation

* In a return given in my first Report, the population of Barrah in 1857 was stated to be, males 32,827, females 30,663, total 63,490. Affected with palsy 2,028, or 3.19 per cent.

† There is not a trace of the disease to be found indigenous in any other part of the Allahabad district. Mr. Court made full enquiries on this subject, and found it unknown in the Doab, or across the Ganges. Several Tehseeldars said that they had seen cases, but that they were among men who had come from Barrah, Khyragurh, or Banda.

of papers ordered for me through Messrs. Thornhill and Mayne, I found them so evidently erroneous, that I do not produce them here. For example, in a vernacular table which was furnished by a Native official, there was a column in which to insert the usual food of the various villages. This was almost invariably stated to be wheat, barley, bajra, kodoo, &c.; kessaree was very seldom mentioned under the name of *peas*, although it was shown in another column that paralytics were common. Thinking this very strange, and suspecting that the whole of the return was a mere effort of imagination, on the part of the official in question, I wrote to Peearree Mohun Banerjee, Deputy Collector of Banda, on the subject: and found, as I anticipated I should do, "that the dal of Kessaree is extensively grown in the pergunnahs affected by the disease, but the people call it by the name of *Chotee Muttur*." He adds, "It is much used by the poor man, and grows abundantly in the hilly tracts of the pergunnahs Cheeboo and Tirohan."

Mirzapore.—The disease would appear to prevail in the Mirzapore district also. But I have failed to obtain any information regarding it through officials, although I tried to do so. Captain F. Chapman, of the Allahabad Military Police, who has lived in the interior of that district, told me that "cases of Paralysis from Kessaree dal in the Mirzapore district are few; but I have never seen a case in which the slightest doubt was expressed as to its use having been the cause. Women, however, are never to my knowledge affected, only the males." He also states that in the Mirzapore district, this vetch is named "*Karoa dal*."

Patna.—The same kind of Palsy is also said to prevail in the neighbourhood of Patna and Gya. Dr. Allen, the Civil Surgeon of the latter station, informs me that "it is very common in the villages of the district." He had not seen the disease himself, but was told by one of his Native Doctors, that a man sleeping near Kessaree dal, which has been cut and collected in a heap in the time of harvest, may become affected with palsy in consequence. This is probably an oriental delusion, but it shows that the natives of that part of India, are aware of some connection between Palsy and Kessaree as a cause thereof.

Affghanistan.—I have been informed that the sepoy part of the Army which accompanied General Elphinstone on the first expedition to Cabul, suffered much in consequence of eating Kessaree dal. They well knew the deleterious effects of its constant use; but as they were often reduced to a pound of attah as their daily ration, they were very glad to make up the deficiency with the dal; and in consequence of eating it many men are said to have suffered from debility; by which term is probably indicated the symptoms that are observed in Khyragurh and Barrah.

Punjab.—I cannot learn that Palsy from the use of Kessaree dal exists in the Punjab; but I have not the means of making any extensive enquiries. Assistant Surgeon J. R. Jackson, who has served a good deal on the frontier, and in other parts of the Punjab, tells me that he has not seen any case of the disease. He further states, that Kessaree is sold in most of the bazaars, and is very commonly used once or twice a month, by way of a change.

Bengal.—I have asked several intelligent and educated Baboos as to the existence of the disease in Bengal; but, as far as I can learn, it is not known. Kessaree dal is found in Bengal, but is not employed as food to the almost total exclusion of all other grains, as in Barrah and Khyragurh. It seems to be very generally eaten by way of a change, as in the Punjab.

Horses gone in the Loins.—There is a disease in the horse known in Bengal, and other parts of India, which affects the spine in the loins, and appears to be of a paralytic nature. A horse so affected is said to be "gone in the loins." Now it seems by no means improbable, as suggested by a writer in the *Englishman* newspaper, in speaking of the disease among the natives of Barrah, that this affection in the horse is similar, and that it is produced in the same way, namely, by the horse feeding on gram largely adulterated with Kessaree dal. I do not know the appearance of the gram usually sold in Bengal, but there is hardly a sample of it to be procured in many parts of the North Western Provinces, which does not exhibit a considerable admixture of a small dark-green pea, speckled with black. This is the Kessaree dal.

Is the affection paralytic.—As to the nature of this affection, I believe it to be paralytic. Others, however, have thought it was of the nature of rheumatism. Assistant Surgeon Abbott of Rewah, who has seen cases of the disease, informs me, that he inclines to this opinion, which is also not uncommon among the natives. The examination of a few bodies after death might probably enable one to give better reasons than can at present be done, for maintaining either one side or the other: Hitherto, however, I have failed to obtain any cases for dissection. There can be no doubt that, if what has been above stated, on the authority of affected natives, of the history of the disease, is true, there are circumstances that would appear at first sight to point to rheumatism as the essential part of the disease. For example, it is generally, if not always, contracted in the rainy season; and again, men who are more exposed to damp, and other causes of rheumatism, are much more liable to the disease than women, who are less exposed. This, however, does not bear investigation. We have the rains over the whole country, and men equally exposed to their influence every where; but the affection is not universal, being confined to certain parts in which the Kessaree dal is cultivated. There are, besides, other arguments against the supposition that the affection is rheumatism. If it were so, we might expect to find other parts occasionally affected, and not invariably the lower extremities only. Again, the only uneasiness complained of—it does not amount to pain—is in the loins, as one would expect in palsy of the lower limbs. But what seems to me, to be the strongest argument in favor of the lameness of Khyragurh and Barrah being of a paralytic, and not of a rheumatic nature, is, that a similar affection has long been known in various parts of Europe, as well as in India, to result from the use of Kessaree dal as well as of some other members of the natural order of plants to which the Kessaree belongs, viz., the Fabiaceæ. In these cases, the affection has been regarded as paralytic. The affection in fact simply seems to be an instance of what is termed Chronic poisoning, that is to say, injurious effects produced by frequently repeated doses of a poison. Other substances, in frequently repeated sm

palsy.

Of this we have familiar instances in the case of mercury and lead, although in the latter instances, the affection is more curable, as these poisons admit of elimination.

Treatment.—As to the treatment of Palsy produced by the use of Kessaree, I have nothing satisfactory to add. Five cases were recently under treatment in the Government Dispensary, and to a certain extent improved on being well fed; but when remedies were administered, the men took fright, and all left. Situated as the people of Khyragurh and Barraah are at present, if any were cured in Allahabad, and were sent back to their homes, they would again be exposed to the action of the exciting cause of their malady, as they would be compelled to live on Kessaree, and would again, in all probability, become affected.

Conclusion.—The form of Palsy to which I have drawn attention, is one of great interest. As yet our information regarding it is but meagre, although the subject seems well worthy of further and fuller investigation, with a view of mitigating the evil. It is indeed remarkable, that thousands of people, who know that a particular grain may render them lame, yet continue to use it as food. Is this because they must either eat the poison or starve? Will no other grain grow, and be productive in the affected parts of Khyragurh and Barraah, except Kessaree? If not at present, will drainage or other means render the soil capable of bearing other, and less deleterious crops? Are there no means, in fact, of inducing the people to give up the use of this poisonous food? These are practical questions well worthy of solution.

In conclusion, I have to express regret that this Report has been so much delayed. It was not, however, altogether my own fault, as I was long delayed, waiting for certain returns.

JAS. IRVING,
Civil Surgeon.

IV.—From J. D. SANDFORD, Esq., Officiating Under-Secretary to Government, North-Western Provinces, to OFFICIATING COMMISSIONER of Allahabad Division.
Dated Nynee Tal, the 3rd August 1860.—No. 871 A.

I am directed to acknowledge the receipt of your letter of the 9th instant, No. 236, submitting a further Report, prepared by Dr. Irving, Civil Assistant Surgeon, Allahabad, on the Palsy which prevails in the Barraah and Khyragurh pergunahs of the Allahabad district.

2.—In reply, I am directed to request, that you will convey to Dr. Irving the thanks of this Government for his interesting reports, which throw much light upon the origin of this distressing complaint, which prevails so commonly in these pergunahs,

The reports will be published in an early No. of the Selections, in the hope that they will attract the attention of other Medical Officers, and lead to investigations being undertaken in other parts of the country.

3.—Apparently the Palsy, which the use of the Kessaree dal, as food superinduces, is practically incurable, and the only means can be beneficially used, must be of a preventive character ; that is to say, such means as will improve the condition and circumstances of the people, whose poverty drives them to support life by the use of this cheap, but most deleterious vetch.

4.—It may be hoped that the revision of settlements in Khyragurh and Barrah, and the large reduction of the Government demand which it will involve, will contribute to this desired end.

J. D. SANDFORD,

Offg. Under-Secretary to Government,

North Western Provinces,

ART. VIII.

REPORT ON A SPECIES OF PALSY OF THE LOWER LIMBS, PREVALENT IN PERGUNNAH BARRAH, ZILLAH ALLAHABAD.

In the cold season of 1856-57 Mr. Court, the Collector of Allahabad, when in
Introduction. pergunnah Barrah, on the right bank of the Jumna, was very foreibly struck by the number of lame persons that he met in all directions. On enquiry he found in village after village that there were several cripples in each. He was also informed that the disease was of recent origin, and that it was attributed by some of the people to their living on bread made from Kessaree dal, and by others of them to the unhealthy qualities of the wind and water of the pergunnah ; causes of disease which are ever ready to be brought forward by natives to account for any unusual or unintelligible sickness. Several cases of Paralysis of the lower limbs were sent by Mr. Court from Barrah, to the Government Charitable Dispensary for treatment. Unfortunately, however, they got tired of the means employed for their cure, and left after being in hospital about a month or five weeks. Mr. Court, however, knowing that I was anxious to enquire into the nature and history of the malady, with his accustomed zeal and kindness accompanied me to Barrah, and afforded me all the assistance in his power. I have much pleasure in recording my sense of the obligation he thus conferred on me.

Close to the village of Kheerut Gohance, on the Sohagee road, Mr. Court had
Examination of the Paralytics. ordered all the lame people from surrounding villages to be mustered for my inspection on the morning of the 6th February 1857. About fifty men were present, all more or less lame in both legs ; some so badly so, as to be hardly able to move ; while others were only slightly affected. One after another was questioned, and the following particulars were thus gathered. Without exception they all stated that they had got lame during the rains. In most cases they had suddenly become so, and several stated that it had been during the night. Men who had gone to bed quite well, had awoke in the morning feeling their legs stiff and their loins weak, and from that time they had never regained the use of their limbs. At first the lameness was trifling, and amounted only to unsteadiness of gait and slight stiffness, chiefly of the knees. After a time the muscles of the thighs commenced to ache and feel weak, and also the loins ; in no case, however, did those examined admit that they had then, or ever, had severe pain either in their limbs or loins. They all ascribed

their disability to their feeding principally on Kessaroo dal, but they also seemed to imagine that in order to produce the disease, there must be another circumstance superadded, viz., the deleterious quality of the water during the rains. So far as could be gathered, it was not from drinking the water that they fancied they took harm, but from getting wet by it. More than one dwelt on the circumstance of his having been exposed to rain, either while ploughing, or while tending sheep, and others spoke of having been working in jheels just before they became lame. The people were particularly examined and questioned as to whether they had had symptoms of fever or of any other disease at the time they became palsied, but they all said that they had not. In only one of many cases examined did I find enlargement of the spleen. Many of the men appeared to be strong looking, and the legs even in most cases did not appear to be much wasted, if at all so. I was also told that the complaint did not shorten life, nor lead to other disease; unless indirectly, in cases in which it prevented the individual working, and thus procuring proper means of support. I was also told that the arms were never affected. There were however, some few cases of persons so much disabled that they could not walk. It was further stated, that males were much more often affected than females, and that the ryots were more subject to the disease than the zemindars, although it also prevailed among the latter class.

The following cases, selected at random, are given as illustrations of the complaint:—

Cases.

1st.—Bhowancedeen, chamar, aged 35, an inhabitant of Keruth Kullan, has been ill six months. He states that he was working in the month of August during rain. The following night he slept in his hut, and awoke next morning with pains of the loins, which were at first very slight. He now walks with considerable difficulty and unsteadiness, dragging the feet and scraping the great-toe nail against the ground in bringing one foot before the other. At the same time that he became paralyzed, two of his children became so also.

2nd.—Sheolall, kolé, aged 45, resident of Keruth Kullan, has been paralyzed for twelve years, and states that he became so suddenly in the rains. He has a boy similarly affected. This man walks very lamely, his toes are turned inwards, and his legs are much wasted. States that in walking he has slight pain of the loins and knees.

3rd.—Doorga, buniah, aged 40, has been paralyzed for eight or nine years past; states that when first seized, he had been grazing cattle during the rainy month of September, and slept in a shed, one morning he felt stiffness in his loins and knees, which has gradually increased. He now walks very lamely, and with much difficulty, the feet being turned inwards and the knees bent. The great-toe nail scrapes the ground. This I have observed in many of the old cases. The nail gets regularly rubbed down to the quick.

4th.—Ramdyal, chamar, aged 21, an inhabitant of Gureia, has been ill about eight years; states that during the rains in the month of July, he had been ploughing

and went home at night, sleeping inside his hut : next morning he awoke paralyzed. His walk is unsteady, and he has difficulty in raising his body from the ground by means of a stick.

5th.—Paleo, cacheo, aged 13, belongs to the village of Gureia; has been lame five or six years. He walks tolerably well with the knees bent; he became ill in the month of October.

6th.—Bundoo Needas, an inhabitant of the village of Tilgunnah, has been paralyzed for eight years. He had been employed driving bullocks in the month of August, and suddenly found himself lame.

Let us now enquire into the extent to which this disability prevails in Barrah. The following is an abstract of the census of the prevalence of Palsy in Barrah. The following is an abstract of the census of the pergunnah for the year 1853.*

HINDOOS.				MUSULMANS.				TOTAL.
Cultivators.		Non-Cultivators.		Cultivators.		Non-Cultivators.		
Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	
20,166	19,221	11,787	11,556	368	395	506	461	63,490

Now it appears from a return kindly furnished to me by Mr. Court, that in the month of January 1857, there were in the pergunnah 2,028 persons afflicted with Paralysis, or 1 in 31·30 of the population as it stood in 1853 or 3·19 per cent.

The above fact discloses a great amount of removeable disease; upwards of 3 per cent. of the population rendered useless by a single disease; for only a few of the paralyzed are able to do any work in order to support themselves. To show the extent to which Palsy of the lower limbs prevails in certain villages, the following

facts may be stated:—Mr. Court informs me that there are 295 villages, and I have a return showing that there are paralytics in 188, leaving 107 villages scattered over an area of 1,58,493 acres, in which there are no cripples.

Note by Collector.

Uninhabited,	59
Afflicted,	188
Not afflicted,	49
Total,	295

Different villages, however, are affected in very different degrees and proportions. Thus in Kuchra, with a population of 371, there is only one paralytic, while in Soonderpoor, with a population of 250, there are 39. In Puchiour, with a population of

* The population here stated differs from that given in the report of the census of the North Western Provinces for 1853. Above I have only given the number of actual inhabitants of the pergunnah on the night of the 1st January 1853. Travellers and others, not, properly speaking, inhabitants, have been excluded.

375, there is one paralytic. In Buschora Uperhar, there are 353 inhabitants, of whom 33 are palsied. In the village of Abheepoor there are 268 inhabitants, of whom 22 are paralytic. In Lohera, out of 557 inhabitants, 8 are paralytic, or 1 in 69. In Pooreh Gunga Chuk there are 261 inhabitants, of whom 20 are palsied, or 1 in every 13. In Buradeeh Zuptee, there are 148 inhabitants, 8 of whom are lame, or in the proportion of 1 in 18. In the village of Harro there are 344 inhabitants, 6 of whom are paralyzed, or 1 in 57. In Room there are 6 paralyzed villagers out of 198, or 1 in 33. In Buckla there are 491, and only 4 paralyzed, or 1 in 121.

The disease, as might be expected, is not confined to Barra. Examples of it are found in Khairagurh of Allahabad, and in the adjoining district of Banda, as shown by the following Memorandum by Mr. Mayne, the Collector of that Zillah, which was obtained for me by Mr. Court:—

Pergunnah.	Thannah.	No. of Villages in which Cripples are known to exist.	No. of Cripples.	Population of Pergunnah.	Percentage.
Chiloo, ...	Mow, ... Burgah, ... Rajapoor, ...	33 26 3	64 131 5	} 80,170	0.219
Total, ...		62	200		
Enohan, ...	Kurwee, ... Manikpoor, ... Bhimree, ...	10 23 12	14 72 31	} 86,312	0.139
Total, ...		45	120		

"The greater amount of cripples in pergunnah Chiloo is to be found in Burgah, which is composed entirely of villages in the hills. In Mow, where the country is less hilly, the numbers decrease, and in Rajapoor where there are no hills, we have none at all. The causes are given as gutheea baice, gurheen beeadh shukembad, gutheea adhung. The same remarks apply to pergunnah Enohan. Thannah Manikpoor is entirely in the hill country, and the cripples are there more numerous. Thannah Bhimree is less hilly, and has less cripples. Kurwee is in the flat country, and contains hardly any cripples."

Before making a few remarks on the cause of the disease, it seems necessary to glance, for a little, at the physical aspect of the pergunnah, and at the circumstances likely to conduce to sickness. Physical aspect of Barra. Pergunnah Barra is bounded on the north by the river Jumna; on the south by the Bilund river, which separates it from the Rewah Territories; on the east by pergunnah Arail, in zillah Allahabad, and by the Tons river; and on the west by the Banda

As might be expected, it is found very close to the surface of the soil. In several wells examined in February, it was only about six feet below the surface of the ground, and in the rains it is said to rise within one foot of the surface.

During the drying up of the rains, there is, as a matter of course, very great sickness all over the pergunnah. The prevalent diseases are Diseases. intermittent and remittent fevers, dysentery, and spleen disease. Whole villages are then struck down with fever, and the Tehseeldar's and Thannahdar's establishments are very frequently left with scarcely a man fit for duty. It is however worthy of remark, that in the thannah, which is at the bottom of a small rising ground, there is much more sickness than in the establishment of the Tehseelee, which is on the top of the same rising ground, yet there is not fifty yards distance between the two places. On this account Mr. Court is about to remove the thannah to the same level as the Tehseelee.

The people of Barraha appear to be very poor, and signs of their poverty are every where visible. In village after village one observes numerous empty and ruinous houses. One never sees a horse, Poverty of the people. camel or eckha, not even a bullock cart. The cattle that one does see employed in ploughing, are small and wretched looking, which is another cause that the cultivation of the soil is rendered more difficult. Such soil as that of Barraha would require strong, able cattle to turn it up. No sign of native wealth or prosperity is visible. I saw no gardens, no topes of trees, nor plantations; all available land is used for cultivation. I saw no Hindoo temple, nor Mahomedan mosque, except a miserable little Hindoo place of worship, which had been built by a buniah at the village of Barraha. Further, I observed none of the monuments of their own wealth, which natives delight to raise, except wells; and these, from the nearness of the water to the surface of the ground, are easily made, and at little cost. Yet even about these, there was an appearance of misery and decay, for, as before stated, the bricks used in their construction, however well burnt, soon crumble down to dust.

I am informed that the rate of Revenue settlement in pergunnah Barraha was originally fixed much too high. This naturally induced a high rate of rent, which has probably led to much misery, the people being forced to avail themselves of the cheapest food, and being unable to procure proper clothing and other necessities. There are several villages in which the zemindar, being unable to pay the revenue, has left the pergunnah. Of such there are sixty-five villages now in the hands of the Collector. There are also several which had been given up by former zemindars, and resumed by Government, which have so much improved under this management, that they are now again farmed out to other zemindars.

The area of Barraha is 1,58,493 acres, and the population 63,490, which gives an average of 256 to the square mile. But the general population of the North Western Provinces, according to the last census, is at the rate of 420 to the square mile, and in the district of Allahabad generally, it is at the rate of 493 to the square mile.

As has been stated, the form of Palsy before alluded to has, by the natives, been pretty generally attributed to their making large use of a particular kind of grain which they call Kessaree dal. It is the *Lathyrus Sativus* of English botanists. It is not unlike grain, and is common enough all over the country, being often sown along with wheat or barley, and cut green for cattle. In Barrah the Kessaree dal is ground and made into bread. It is sometimes mixed with some other grain, as barley, but is generally taken alone, the people in fact not being able to afford any thing else. It is the cheapest food procurable in Barrah, and forms the chief support of the inhabitants from March till October. On the 7th February, in the bazaar of Barra, wheat sold at the rate of fourteen seers per rupee, while Kessaree dal was at the rate of twenty-two. It grows without any labour or trouble, and on damp, swampy ground that will bear no other crops. The land is merely ploughed once, and the seed thrown in, or the plant sows its own seed, which germinates freely next year, without any attention or labour being required. The moist nature of the soil should be noted in connection with the production of this poisonous *Lathyrus*, for it is stated by Loudon, in speaking of *Lathyrus Cicera* causing paralysis of the lower limbs in those who live on bread, partly made of it in some continental states, that the plant grown on a strong moist soil is more injurious than that cultivated on one which is dry and light. (*Encyclopædia of Plants*, p. 620. *Taylor on Poisons*, p. 536).

That the use of Kessaree dal, as an article of food, is apt to lead to paralysis of the lower limbs, appears to be very generally known to the inhabitants of all parts of India. Dr. K. W. Kirk, in his *Medical Topography of Upper Sindh*, says: "My attention was first attracted to it (paralysis) as follows:—A villager brought his wife, a woman of about thirty years of age, to my hospital, with paralysis of her lower extremities: she had been so afflicted for the last four years. I asked whether she had had a fall or a blow to cause the disease. 'Oh no,' said the man, 'it is from Kessaree; we are very poor, and she was obliged to eat it for five months on end.' I had never heard of such effects before from any grain, and asked whether it was good of its kind. Finding it was so, I sent the man into the bazaar to bring me a handful, which I afterwards showed to some respectable natives, and was told that disease from its use is very common all over the country. The villager above alluded to, said that if they had sowed a better kind of grain it would have been plundered by the Beloochees from the hills, but they would not take this. I did not enter a village in Sindh where this Kessaree was not to be found in the bazaar, and daily used by great numbers of poor people, nor where several were not rendered most helpless objects by the use of it. Their general health seemed good however, their only complaint being that they had no power in their legs, but they moved about by lifting themselves on their arms. All natives know that this dal is a poison, and eat it only because it is cheap, thinking that they can stop in time to save themselves from its consequences." (Kirk, pp. 59, 60.)

Colonel Sleeman states, that in part of the Saugor Territories in 1829, and two succeeding years, the wheat crop failed from various reasons, and during these three years the Kessaree remained uninjured, and thrived with great luxuriance. In consequence it formed the only food of the people during the three years of famine. "In 1831, they reaped a rich crop of it from the blighted wheat fields, and subsisted upon its grain during that and the following years, giving the stalks and leaves only to their cattle. In 1833 the sad effects of this food began to manifest themselves. The younger part of the population of this and the surrounding villages, from the age of thirty downwards, began to be deprived of the use of their limbs below the waist by paralytic strokes; in all cases sudden, but some more severe than others. About half of this village, of both sexes, became affected during the years 1833-34, and many of them have lost the use of their lower limbs entirely, and are unable to move. Since the year 1834 no new case has occurred, but no person once attacked had been found to recover the use of the limbs affected." He further adds, that "many of those he saw were fine-looking young men, of good caste and respectable family. They stated that their attack had come on suddenly, often while the person had been asleep, and without any previous warning. Males were said to be more subject to the disease than females. They believed that both horses and bullocks fed on Kessaree lost the use of their limbs." (Sleeman's Rambles and Recollections of an Indian Official, Vol. I., pp. 134, 135.)

Dr. Thomas Thomson, of the Calcutta Botanic Gardens, further informs me, that he had met with examples of paralysis produced by the use of *Lathyrus Sativus* in Thibet, as he has noted in

In Thibet. his Travels in the Himalayahs,—a work which unfortunately I have not by me at present in order to refer to it. From an intelligent educated native (Pursidh Narain Singh, Tehseeldar of Hundya, zillah Allahabad), I have obtained the prevalent native ideas in reference to Kessaree dal. The lameness is supposed to be a mixture of Palsy and Rheumatism. Living on Kessaree dal, is supposed to be the predisposing, and exposure to cold, rain and damp weather, the exciting cause of the disease. He says—

Prevalent ideas of Natives of North Western Provinces. "The bhoosa of this grain may be given to cows and bullocks, without any harm, but such is not the case with horses who are affected (in consequence of eating it) with what is called by natives Koorkooree. I do not know the English term for it; but with a view to convey a correct explanation of the disease, I respectfully beg to describe the symptoms which I personally observed in the horse, suffering from the effects of eating the Kessaree bhoosa. Three hours after eating the bhoosa, the animal was seized with convulsions, the legs, which lasted for a while. There was a total cessation of urinary evacuations, attended with a partial loss of voluntary motion in the legs. The horse, however, recovered by the introduction of a stiff wick moistened with chilly water in the urethra, and the administration of strong country spirits, called Phool sharab. The natives consider Kessaree grain to be void of all nourishment, and declare it to have a peculiar effect upon

the lower portion of the spine. It is also said that Kossaree grain makes the system susceptible of catching other diseases, to such as scrofula, particularly in Patna district. (Letter from Parsidh Narain Singh)

Similar effects have been observed in Europe, to follow the eating of other kinds of grain produced by the same great natural order of plants, the Fabiaceæ. Thus Doctor Taylor alludes to *Lathyrus Cicera*, and *Errum Ervilia* (bitter vetch), as occasionally rendering bread poisonous. In some parts of the Continent, a bread is made from the flour of the *Lathyrus*, which is so injurious in its effects, that the use of it has frequently caused its prohibition by law. London states that when mixed in equal parts with wheaten flour, it makes a good-looking bread, which however occasionally gives rise to weakness of the knees and spasmodic contractions of the muscles. Cattle and birds, when fed on the seeds, are said to become paralyzed. A more recent example of the poisonous effect of *Lathyrus Cicera* flour is furnished by Mr. Vilmorin:—He remarked, that "the use of this bread for a few weeks produced complete paralysis of the lower extremities in a young and healthy man. Six or seven individuals of the same family who had eaten it suffered more or less from similar symptoms, and one had died. A physician who practised in the district, remarked that paralytic affections were very common among the poor, who subsisted on this bread, while they rarely occurred among the better classes. When the *Lathyrus* flour, formed one-twelfth part, no inconvenience was observed to attend its use; in a proportion greater than this, it became injurious; and when it amounted to one-third part, the effects might be serious." (Ann. d. Hyg, Avril 1847, p. 469. Taylor on Poisons, p. 536.)

Doctor Lindley also states, that the seeds of *Errum Ervilia*, another of the Fabiaceæ, mixed with flour, and made into bread, produce weakness of the extremities, especially of the limbs, and render horses almost paralytic. (Vegetable Kingdom, 2nd Edit., p. 548.)

Don, in the Gardener's Dictionary, says that the flour of *Lathyrus Sativus*, mixed with wheat flour in half the quantity, makes very good bread, but alone produces surprising rigidity of the limbs in those who use it for a continuance.

As to the treatment of cases of paralysis caused by the use of *Lathyrus Sativus*,
 Treatment. I have little to say from practical experience. Some eight cases have been under observation at the Dispensary; six after staying a month, went away, as they did not like the blisters, and other means of cure employed. I tried in some of them, strychnine; in others, blisters frequently repeated; in others, tonics. To all I gave generous diet. Two seemed to be somewhat benefited, and could walk better; but in the others, there was no perceptible improvement. Two men and a boy* are now

* The boy is son of one of the men, and so much palsied that he walks with great difficulty by means of two sticks. He is not yet improved in any respect.

under treatment; one is much improved, he used to employ two sticks in walking, but can now do without assistance.

The natives of Barrah do not appear to have any kind of treatment except rubbing the affected limbs with various liniments, one of which is composed of oil, the juice of garlic and opium. They also fancy that eating pigeon's flesh is of use. But what is most remarkable is, that they are fully persuaded that eating Kessaree dal causes Palsy, and that it is an incurable disease; yet, notwithstanding, they continue to live on this grain, as their fathers and grandfathers did before them. It had been stated to Mr. Court, that the paralytic affection prevalent at Barrah was of recent origin, but on asking the Kanoongoe, (by name Bishesur) who had known the pergunnah for twenty years past, I was informed that the disease had to his knowledge always existed, although he thought that of late it had become more common; and villages in which formerly there were no cripples, now contain several.

I ought to state that I obtained specimens of all the grains found in the bazaar at Barrah, which I submitted to Dr. T. Thomson, of the Calcutta Botanic Gardens, for examination, under the impression that some of them might also be unwholesome. In reply he writes:—"The different grains sent, seem all good, and there is no doubt, I believe, that the Lathyrus is the cause of disease." I had been informed at Barrah by numbers of the people, that wheat of the usual white colour, when sown in the pergunnah, became red. It was also stated, that the red seed produced in Barrah if sown in another part of district, again became white. This of course I have not yet been able to test, but I asked Dr. Thomson regarding it, and he says in reply,—
 "The transformation of white wheat into red, in one generation, seem strange and scarcely credible. I shall send the specimens home, and ask about the existence of any thing similar elsewhere."

The remedy for the eradication of this form of Palsy is very evident, although how to apply that remedy is confessedly more difficult. All that is of course necessary is to prevent the people eating the poisonous grain; or to get them to use it very much diluted with wholesome flour, and the spread of the disease is at once arrested. The latter of these ideas is doubtless impracticable, seeing that the people of Barrah know very well that in eating Kessaree dal, they are eating poison. It would further be quite out of place for me to discuss in this place the propriety or otherwise of prohibiting, by legal enactment, the use of this grain. I may however mention another scheme of manifest utility, which is to induce the people of this and of other pergunnahs, in which the disease prevails, to abandon the cultivation of Kessaree dal, and to substitute some other grain. The drainage of the country also would be an immense boon, and would render the land available for many crops, which it cannot now bear. I suspect, however, that such a proposition involves too great an outlay for the improvement of an unimportant part of the district. Whether the drainage could be easily deepening the nullah that now exists, I am unable to say.

Although perhaps this disease does not admit of being greatly benefited by medicines, yet when the very unhealthy condition of the whole pergunnah is considered, and when the many cases of disease that there exist, are taken into account, it must be evident how greatly a good Branch Dispensary is here required. Such an institution if well conducted by a trustworthy Native Doctor of experience—one who by his skill and attention should gain the confidence and esteem of the people, would contribute much to the comfort of many sick persons, who are now left without medicine or advice, or the chance of obtaining either.

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